ANNUAL REPORT OF
THE COMMISSIONER
OF PATENTS

REPORT

OF THE

COMMISSIONER OF PATENTS

FOR THE YEAR 1862.

ARTS AND MANUFACTURES.

U.S. Patent Office.

VOLUME 1.

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Burners, Kerosene lamp	H. F. Adams and W. Berry	35,660
Burners, Kerosene oil	P. D. Cummings	34,880
Burners, Lamp	J. D. Custer	34,742

Invention or Discovery.	Name of Patentee.	No.
Burners, Lamp	C. P. Brocket	35,010
Burners for lamps	H. C. Hutchinson	35,157
Burners, Lamp	N. W. Williams	35,860
Burners, Lamp	E. B. Requa	35,893
Burners, Lamp	E. Trittin	36,262
Burners, Lamp	F. J. Rebbeck and E. M. Davies	36,367
Burners, Lamp	A. J. Simpson & J. B. Currier	36,374
Burners, Lamp	C. B. Matthews	36,417
Burners, Lamp	B. R. Alden	36,694
Burners, Lamp	A. C. Ketchum	36,717
Burners, Lamp	J. J. Marcy	37,047
Burners, Vapor	M. L. Callender	36,452
Burners, Vapor, Self-generating	J. S. Gray	36,404
Butter, Purifying	G. W. Putnam	34,592
Butter, Working, Machines for	M. A. Richards	35,543
Butter worker and churn	A. Hawver and W. H. Hanyen	34,144
Buttons	G. A. Meacham	34,897
Button fastener	G. A. Meacham	34,895
Button holes, Apparatus for piercing cloth for	D. W. Whitney	36,594
Button holes, Making	H. Loewenburg	35,163
Button holes, Stitch for	W. Weitling	34,454
Button-hole cutters	E. Stern and J. S. Newell	37,115
Button-hole stitch	D. W. G. Humphrey	36,616
C.		
Cab, Brakesman's	H. C. Glasgow	34,829
Cables, Apparatus for working and stopping chain.	W. H. Harfield	36,085
Cables, Apparatus for working and stopping chain.	W. H. Harfield	36,086
Cables, Telegraph	L. Andrews	36,630
Cables, Telegraphic	J. Morgan, A. T. Jay, E. Edwards, and J. Tilston.	34,862
Cables, Telegraphic, Laying	T. Shaw	35,128
Cable Stopper	J. Robinson	37,109
Cages, Bird	J. Maxhermer	35,459
Calenders, Portable	J. N. Dudley	35,143
Calk or ice shoe	D. Bennet	34,809
Camels, Marine	S. Woolston	36,745
Camera, Multiplying	W. Southworth	35,635
Camera, Photographic	A. B. Wilson	34,800
Cameras, Photographic, Lens for	C. C. Harrison and J. Schnitzer	35,605
Camera obscuras	G. F. Kolb	34,970
Camera Stand	E. M. Corbett	35,671
Cans for cotton rovings, Drawing	M. Mead	35,169
Can for fluids	J. Clements	36,190
Cans, Fruit	O. F. Fitch	34,627
Cans, Fruit	W. W. Lyman	35,529
Cans, Oil	E. S. Scripture	34,529
Cans for oils, varnishes, &c	E. T. Woodward	36,188
Cans for oils, varnish, &c., Sheet metal	R. Porter	36,359
Cans, Packing for transportation	J. F. Drumond	34,547
Cans, Preserve	H. S. Fisher	36,264
Can for preserving fruits, &c	G. W. Griswold	35,933
Cans, Preserving vegetables in hermetically sealed.	I. Winslow	36,326
Can or bottle stopper	J. Dunton	37,221
Cans and jars, Preserving	G. S. G. Spence	36,970
Can or tank for coal oil	C. H. Phelps	36,478
Canals, Stop dams for	J. Knapp	35,242
Cancelling notes, checks, &c	E. M. Scott	34,850
Candles, Machine for making mould	A. Black	35,359
Candle-moulding machines	G. Roth	36,798
Candlesticks	A. E. Lyman	34,758
Candlesticks, Camp	C. Alexander	34,045

Invention or Discovery.	Name of Patentee.	No.
Cane and stool, Convertible	J. Wade	34,096
Cannon, Boring and rifling	P. Foy	34,661
Cannon, Breech-loading	J. B. Prescott	34,263
Cannon, Device for firing	D. Treadwell	37,017
Cannon, Firing by attached fuse	E. Gomes	34,056
Cannons, hydraulic pumps, &c., Fagots for wrought metal.	S. J. Reeves	37,108
Canteen	L. Cantel	36,641
Canteen	F. Gardner	36,835
Caoutchouc, Treating	L. Hull	37,231
Caoutchouc. (See, also, *India Rubber* and *Rubber.*)		
Caps	J. W. Bryant	36,549
Caps, Army and navy	W. F. Warburton	36,315
Capstans	Z. E. Coffin	35,730
Capstans and windlasses, Construction of chain.	W. H. Harfield	36,087
Carburetting air, Apparatus for	O. P. Drake	35,144
Cards, Cylinders for machine	C. E. Brownell	34,734
Cards, pictures, &c., Metallic cases for	H. J. and T. Hall and H. Hall, jr.	34,489
Card holder	J. Dean	36,283
Card receiver and door plates	S. A. Baldwin	36,388
Carpets, Sizing the backs of	H. G. Thompson	36,738
Carpet stretcher	E. Wood	36,187
Carriages	L. D. Cowles	34,197
Carriages, Attaching and detaching horses to and from.	P. W. Hardwick	34,253
Carriages, Hold-back for	T. F. Griffiths	36,347
Carriages, Hold-back for	H. A. Harris	37,227
Carriages, Machine for raising	E. Huson	34,427
Carriages, Method of constructing	E. W. Seymour	35,204
Carriages, Pile or faggot for shoe rail for gun	J. L. Lewis	36,223
Carriages, Running gear of	N. Adams	34,342
Carriages, Street railway	W. L. Burt	36,137
Carriages, Sub-marine	A. O. Crane	36,340
Carriage for sugar moulds	T. A. Havemeyer and H. Schinitzspan.	34,686
Carriage tops and backs, Shifting	R. M. Stivers and G. W. V. Smith	36,539
Cars, Ice	F. L. Kidder	34,718
Cars, Locomotive	W. Romans	34,271
Cars, Propelling	W. J. Sage	34,269
Cars, Railroad, Collecting letters in street	J. B. Murray	35,323
Cars, Railroad, Construction of	C. M. Atkins	36,762
Cars, Railroad, Running-gear of	J. H. Dennis	34,134
Cars, Railroad, Running-gear of	T. Wilson	34,544
Cars, Railroad, Starting horse	A. Cary	34,199
Cars, Railroad, Ventilating	A. T. Smith and C. W. Wagner	36,536
Cars, Railroad, and locomotives, Preventing jarring and jolting.	R. A. Riley	34,525
Cars, Street, Starting	J. S. Briggs	34,477
Cars for street railways, Running-gear of	A. McNair	35,244
Cars, Warming passenger	J. B. Johnson	35,612
Carts, Self-weighing	E. Blackman	36,631
Cartridges	J. C. Mayberry	35,699
Cartridges	E. O. Potter	35,949
Cartridges adapted to breech-loading fire-arms	B. King	34,579
Cartridges, Ball	R. O. Doremus and B. L. Budd	34,725
Cartridges for fire-arms	A. Shannon	34,615
Cartridges for fire-arms, Envelopes of	A. K. Johnston and L. Dow	34,061
Cartridges, Metallic	C. Sharp	34,987
Cartridges, Metallic	H. Kellogg	35,878
Cartridges, Muzzle of fire-arms for cutting off	C. H. Bradley	34,235
Cartridges, Patched	W. H. Elliot	35,872
Cartridges, Shot	B. L. Budd	34,806
Cartridges, Skin	J. Hotchkiss	34,367
Cartridges, Solid	R. Bartholow	36,066

Invention or Discovery.	Name of Patentee.	No.
Cartridges, Treating gunpowder to form	R. O. Doremus and B. L. Budd	34,724
Cartridges water-proof, Rendering	A. K. Johnston and L. Dow	35,687
Cartridges, Water-proofing	R. O. Doremus and B. L. Budd	34,744
Cartridge boxes	A. Domis	34,820
Cartridge boxes	F. Bush	37,216
Cartridge boxes, Fastenings for	W. Z. W. Chapman	34,453
Cartridge cases, Metallic	E. C. Dunning	34,713
Cartridge retractor for breech-loading fire-arms	C. M. Spencer	36,062
Cartridge-tearer for muskets	D. Kelly	37,171
Cases for railroad ticket	J. H. Duffield	34,245
Casks, Bung for oil	A. Walton	36,490
Casks for holding oil, quicksilver, &c	A. D. Campbell and E. Pierce	34,051
Casks, Lining for coal oil	S. G. Morrison	36,474
Cask, Oil-proof	G. E. Van Derburgh	34,707
Casks, Sheet metal	S. J. Seely	36,175
Cask, Water-tight	D. C. Rand and M. Wadhams	36,168
Casks and barrels, Coating for oil	S. H. Titus	37,018
Caster, Furniture	J. H. Bloomfield	36,890
Caster, Furniture	J. M. Riley	37,008
Caster, Furniture, Ball	J. Holmes	34,833
Casters, Glass table	A. E. Young	35,799
Caster, Spring	E. J. Hall	34,463
Casters from vulcanizable compounds, Manufacture of.	C. Goodyear, jr	35,231
Casting Minie balls, Apparatus for	C. B. Tatham	35,334
Cattle, Device for fastening	S. E. Southland	35,331
Cellar, Artificial	V. Haeffner	37,095
Cement, Process of treating coal tar to manufacture roofing.	A. H. Perkins	36,632
Cement for roofing and other purposes	J. Mosteller	35,464
Cement for slate roofing	C. Wanzer	35,720
Cement pipe, Moulding	H. Knight	35,692
Centring implement	F. Deluce	34,412
Chains, Railroad joints or	Levi B. Tyng	34,452
Chair, Cradle	J. H. Havens	36,091
Chair, Folding	N. Cross	35,993
Chair, Folding arm	W. C. Goodwin	34,204
Chairs, Railroad	I. Leonard	34,307
Chairs, Railroad	O. J. Hall	34,612
Chairs, Railroad	F. A. Brown	35,076
Chairs, Railroad	J. H. Mabbett	37,045
Chair, Reclining	W. H. Van Northwick	36,130
Chairs, Seats and backs for	H. T. Pratt	36,026
Chair, Spring back	T. D. Judah	35,761
Chairs, lounge and bedstead	S. A. Skinner	36,441
Chairs and rails, Railroad	N. W. Northrup	35,537
Chair backs, Cutting	E. Edwards and J. Cowee, jr	34,675
Chamfering and crozing machine	H. Wilde	36,186
Charcoal for refining sugar, Revivifying animal.	A. H. Lepley and J. F. J. Cuisinier.	35,160
Checker-board and writing case, Combined	H. C. Small	34,168
Checks, notes, &c., Cancelling	E. M. Scott	34,850
Cheese frames	A. C. Ainger and S. W. Webster	37,140
Cheese vats	F. X. Manahan	34,511
Cheese vats	O. Sage	35,327
Cheese vats, Valves to heaters for	H. A. Roe	35,396
Chenille, Manufacturing	W. Canter	35,969
Cherries, Stoning	T. Van Karmel	36,683
Chest of drawers	C. H. Walker	35,340
Chest, Table and camp	H. W. Ball	34,047
Chest and camp cot, Combined	T. J. Griffin	34,250
Chest and table for bread-making	B. Gonzales	36,777
Chimney and filling lamps, Mode of removing.	J. R. Baker	35,664
Chimneys for lamps	E. P. Dickie	34,293
Chimneys for lamps	H. Brown	34,733
Chimneys, Lamp	W. O. B. Merrill	35,536

Invention or Discovery.	Name of Patentee.	No.
Chimneys, Lamp	W. L. Fish	35,598
Chimneys, Lamp	E. S. Blake	35,866
Chimneys, Lamp	C. Dorflinger	36,078
Chimneys to lamps, Attaching	W. Morehouse	34,842
Chimneys, Lamp, Cleaner for	M. R. Kenyon	35,939
Chimneys, Lamp, Cleaner for	C. Bœckh	36,600
Chimneys, Lamp, Coal-oil	W. Howard	35,747
Chimneys, Lamp, Fastener for	W. Fulton	34,884
Chimneys, Lamp, Fastenings	J. and A. W. Sangster	36,802
Chimneys, Lamp, Fastenings for	L. C. White	37,119
Chimneys, Lamp, Heaters for	J. B. Greene	36,584
Chimneys, Lamp, Holder for	O. Newton	34,900
Chimneys, Lamp, Mica	L. Van Order	34,917
Chimneys, Lamp, Mica	E. S. Gaylord	36,675
Chimneys, Lamp, Mica	J. W. Schreiber	36,237
Chimneys to lamps, Securing	T. T. Jacobs	35,239
Chimneys, Lamp, Spring catch for	M. Fowler	35,649
Chimneys, Lamp, Spring fastening for	W. S. Thompson	37,183
Chimney protector, Lamp reflector and	G. F. J. Colburn	35,507
Chloroform, Apparatus for inhaling	C. B. Porter	35,257
Chronometer escapements	R. Barclay	36,637
Churns	A. Westcott	34,082
Churns	G. W. Gilbert	34,110
Churns	R. Justis	34,208
Churns	J. Vincent and S. Leslie	34,383
Churns	J. H. Doughty	34,416
Churns	A. G. Searls	34,784
Churns	W. Boynton, Jr	34,936
Churns	J. Luccock and J. McL. Gowdy	35,101
Churns	H. C. Pierce	35,110
Churns	A. Westcott	35,120
Churns	J. Parker	35,540
Churns	G. Copeland and G. P. Martin	35,588
Churns	H. P. Myers, I. Searles, and G. W. Spencer.	35,620
Churns	T. Prose	35,628
Churns	C. D. Van Allen	35,638
Churns	D. L. Grover and L. S. Wright	36,147
Churns	J. Hewitt	36,151
Churns	A. G. Binns	36,269
Churns	S. A. Wheelock	36,379
Churns	J. Lees	36,787
Churns	J. Thompson	36,811
Churns	H. Barr	36,935
Churns	C. R. Tuttle	37,016
Churns	A. G. Eddy	37,090
Churns	M. Payne	37,106
Churns	J. Brinkerhoff	37,214
Churns	H. Gardiner	37,224
Churns	W. Robinson	37,244
Churns	T. T. Ffirth	37,254
Churns, Operating	G. A. Dabney	34,567
Churn dasher	H. N. Stearns	34,652
Churn dashers	M. J. Palmer	34,770
Churn and butter worker	A. Hawver and W. H. Hanyen	34,144
Churning, Power for	A. A. Drake	35,813
Cider and other juices of fruits, Concentrating and preserving for use.	G. Borden, jr	35,919
Cigars, Machine for making	I. A. Heald	35,442
Cigar machines	I. S. Barber	35,728
Cigars and pipes, Mouth-pieces for	B. S. Stokes	35,491
Clam-opener	J. N. Hawkins	35,495
Clasp for harness tugs	J. S. Gilman	35,995
Clasp for lamp shades	C. Reichman	34,332
Claw bars	J. Lamplugh	37,172
Cloak, tent, bed, &c., Combined	T. C. Brecht and S. B. Sigesmond	36,658

Invention or Discovery.	Name of Patentee.	No.
Cloaks	C. and M. Stevens	34,589
Clocks, Calendar	B. B. Lewis	34,341
Clocks, Calendar	E. M. and J. E. Mix	34,613
Clocks, Watch	J. Hamblet, jr	35,755
Clock and watch movement	D. J. Mozart	36,103
Clock cases	G. B. Owen	36,105
Closets, Water	P. W. Nefus	34,118
Cloth, Fulling	R. Hunt and J. H. Waite	36,005
Cloth, Manufacture of figured rubber	L. Burt	35,992
Cloth, Producing diagonal	R. C. Helm	34,960
Cloth, felt, &c., Water-proof coating for	J. Ditto	34,947
Cloth, leather, &c., Composition for water-proofing.	C. G. Smith	35,400
Cloth plaiting machine	H. Dunphy	35,367
Clothes bar	H. Willard	34,456
Clothes dryer	G. McNeil	34,372
Clothes dryer	A. Krotzer	34,637
Clothes dryer	H. A. Houghton	35,375
Clothes dryer	C. A. Hunt	35,684
Clothes dryer	M. C. Burr	36,204
Clothes dryer	J. A. Pease	36,726
Clothes dryer, Rotating	W. Boyers	34,802
Clothes dryer, Window	J. R. and J. A. Shepard	35,898
Clothes drying apparatus	C. Goldthwait	34,487
Clothes frame	H. Littlejohn	34,113
Clothes frame	M. J. Knox	35,027
Clothes frame	J. E. Earle	36,994
Clothes hanging apparatus	J. O. Montignam	36,666
Clothes pin	E. A. Cone	36,394
Clover, Threshing and hulling and cleaning the seed.	J. C. Birdsell	35,209
Clover machine	M. H. Mansfield	34,764
Clover-seed, Threshing and hulling	G. W. Fosdick and J. Crawford	37,162
Coals, &c., Machine for loading	C. Bushor	35,297
Coal screens	J. Lanbenstien	34,306
Coal screens. (See, also, *Sifters, Coal.*)		
Coal tar to manufacture roofing cement, Process of treating.	A. H. Perkins	36,632
Coat sling or carrier	D. F. Drake	37,029
Coffee boilers	E. F. Woodward	34,801
Coffee pots	N. D. Hartly and M. S. Morehouse	35,021
Coffee roasters	J. C. Holston	34,923
Coffee roasters	C. L. Kelling	34,968
Coffee roasters	E. J. Hyde	35,758
Coffee roasters	T. Joyce	36,958
Coffins	W. J. and A. E. Lyman	35,102
Coffins, Handles for	B. W. Wooster	34,387
Coffins, Ventilating	A. E. Lyman	36,660
Coffins. (See, also, *Burial Cases.*)		
Coin detectors, Counterfeit	W. Painter	35,834
Colors, Manufacture of aniline	P. Monnet	36,357
Colors, Producing aniline	P. Monnet	36,556
Colter and gauge-wheel combined, Revolving extension.	W. H. Willard	37,065
Columns, shafts, braces, &c., Construction of	S. J. Reeves	35,582
Combs, Curry	M. Sweet	36,736
Compasses, Magnetic	H. W. Hunter	35,156
Compasses, Mariners'	E. S. Richie	34,422
Condenser for coal-oil stills	C. W. Grannis	36,403
Condensers for making potable water	W. A. Lighthall	35,319
Condensers for oil stills	J. Adair	35,497
Condensers, Potable water	W. A. Lighthall	35,029
Condensers for steam engines	A. C. Twining	36,183
Condensers for stills	H. C. Sherman	34,648
Condensers, Surface	G. H. Corliss	36,280
Condensers, Surface	F. B. Stevens	36,807
Condensers, Surface	F. B. Stevens	36,809

Invention or Discovery.	Name of Patentee.	No.
Condensers, Surface	F. B. Stevens	36,810
Condensers, Surface, Shields for	F. B. Stevens	36,808
Condenser, heater, and filter, Combined	W. A. Lighthall	36,010
Condensing and evaporating, Apparatus for	J. J. Miller	37,258
Confectionary, Making	S. S. Campbell and J. Goodwin	36,601
Cooking apparatus	W. Fulton	34,297
Cooking apparatus	J. U. Fiester	35,512
Cooking apparatus	W. Fulton	37,092
Cooler, Portable milk	J. M. Sanborn	35,569
Cooling and freezing, Apparatus for	A. C. Twining	35,051
Copper, Electro-plating iron and other metals with.	J. E. Walcott	34,470
Copper, Manufacture of sheet	L. Powe	36,822
Copper from ores, Extracting	F. W. Dahne	35,508
Copper ores, Treating	H. J. M. Puistienne	34,591
Copper, iron, and zinc, Composition metal of	A. Birkhole	34,621
Cord-winder	C. Goodwin	34,954
Cork	W. H. Towers	37,249
Corks, Cutting	E. Conroy	34,291
Cork, Cutting, for stoppers	J. D. Crocker	34,741
Cork, Cutting, into strips	C. Gregor	34,716
Cork-cutting machines	H. Boardman	35,867
Corkscrew	A. T. Russell	34,216
Cork sole for boots and shoes	H. Lyon	34,437
Corn, Device for husking	A. W. Brinkerhoff	36,333
Corn preserved green, Indian	I. Winslow	34,928
Corn, Preserving green	I. Winslow	35,274
Corn, Process of preserving green	I. Winslow	35,346
Corn, Shelling and cleaning	L. A. Beebe	36,700
Corn-shellers	A. B. Davis and T. Crook, jr.	34,410
Corn-shellers	J. W. Ricker	34,775
Corn-shellers	C. Robbins and R. P. Burlingame	34,846
Corn-shellers	A. Swift	34,912
Corn-shellers	G. Turner	35,119
Corn-shellers	J. P. Smith	35,185
Corn-shellers	J. S. Fowler	35,227
Corn-shellers	S. Richardson	35,625
Corn-shellers	A. B. Allen	35,864
Corn-shellers and cleaners	J. Hubler and R. M. McGrath	35,757
Corn-sheller and straw-cutter, Convertible	S. J. Taylor	34,533
Corpse preservers	L. D. Bunn	36,765
Corrugated plates, Manufacture of	S. J. Seely	36,421
Corsets	A. J. Brooks	36,272
Cot, Camp and Chest, Combined	T. J. Griffin	34,250
Cot, Soldiers'	E. W. Pierce and W. J. Clark	34,089
Cot, trunk, table, &c., Sofa convertible into	J. C. Hall	35,517
Cotton, Cleaning	I. Hayden	34,363
Cotton, &c., Dust-rooms connected with machines for picking.	R. Kitson	36,219
Cotton, Ginning	J. Percy	35,109
Cotton, Machines for combing	C. Whipple and R. J. Stafford	34,606
Cotton, Throttles for spinning	J. Higgins and T. S. Whitworth	34,753
Cotton, Treating flax and hemp to make them resemble.	J. P. Comby	34,619
Cotton, wool, &c., Machinery for cleaning	S. R. Parkhurst	35,621
Cotton-gins	J. Platt and W. Richardson	36,789
Cotton rovings, Drawing cans for	M. Mead	35,169
Cotton waste, Separating	F. S. Robinson	36,625
Countersunk holes, Mode of punching	J. V. Westblake	37,189
Counting machines	T. J. Young	34,665
Couplings, Car	E. C. Hamlin	34,143
Couplings, Car	T. L. Birch and J. C. Noble	34,289
Couplings, Car	M. Waterbury	34,384
Couplings, Car	J. B. Van Dousen	34,604
Couplings, Car	H. A. Smead and C. H. Huntly	35,399
Couplings, Car	R. D. Turner	35,849

Invention or Discovery.	Name of Patentee.	No.
Couplings, Car	W. J. Dodge	35,994
Couplings, Car	J. P. Sinclair	36,241
Couplings, Car	S. Thorp	36,247
Couplings, Car	W. F. Grassler and A. J. Cutter	36,293
Couplings, Car	A. C. Baker and J. Van Dyne	36,331
Couplings, Car	A. J. Ambler	36,382
Couplings, Car	N. W. Northrup	36,758
Couplings, Car, Automatic	H. T. Promertze	34,284
Couplings, Car, Railroad	W. T. Spiers	35,333
Coupling for double ploughs	G. Owen	34,316
Coupling, Friction	A. & F. Brown	36,832
Couplings, Hose	W. H. Bliss	34,476
Coupling, Hose	R. Hoskin	34,888
Coupling, Hose	E. B. Jucket	36,410
Coupling, Hose	M. A. Winham	36,433
Coupling, Hose	J. Williston	37,021
Coupling for octaves, &c., in Melodeons	B. W. Nichols	34,588
Coupling, Shaft	G. N. Trowbridge	36,181
Couplings of shafting, Sustaining and protecting.	J. L. Race	34,982
Coupling, Shafting, and rods	N. W. Northrup	34,769
Cradles	W. H. Earnest	35,307
Cradles, Self-rocking	D. Walker	34,535
Cranberries for preservation, Putting up	A. Sampson	37,058
Cranes, Hoisting	C. Bassett	36,598
Cranks for driving sewing machines and other machinery.	T. Williams	36,263
Crank and cross-head connexion for steam engines.	J. S. Barden	34,400
Crank motion	E. P. Brownell	34,735
Crate and basket, Fruit	A. F. Newell	36,723
Cribs for horses	H. Eddy	36,287
Crimping and frilling, Machines for	C. O. Crosby and H. Kellogg	37,033
Crinoline clips	H. Fletcher	35,091
Croup, Medicine for	C. Sanborn	34,90[illegible]
Crozing machines	V. W. Houck	35,519
Crozing and chamfering machine	H. Wilde	36,186
Cruet or decanter	A. H. Newton	34,899
Crutches	J. Whittemore	36,743
Crystals, Machine for cutting	P. Pryibil	36,548
Cultivators	N. S. Harryman	34,362
Cultivators	J. Collins	34,406
Cultivators	A. Sawyer and H. Barnes	34,528
Cultivators	W. H. Kelley	34,578
Cultivators	I. A. Green	34,630
Cultivators	F. E. Brown	34,732
Cultivators	J. Gross	34,828
Cultivators	J. K. Dugdale	35,223
Cultivators	L. B. Waterman	35,282
Cultivators	W. Lyman, jr	35,422
Cultivators	P. S. Cahart	35,505
Cultivators	A. B. Cass	35,668
Cultivators	R. D. Dodge	35,673
Cultivators	C. A. Uhl	35,718
Cultivators	J. Van Horn	35,961
Cultivators	J. N. Baumann	35,965
Cultivators	J. S. Padon	36,019
Cultivators	N. B. Cooper	36,139
Cultivators	I. B. Jones	36,158
Cultivators	E. S. Tichenor	36,180
Cultivators	R. R. Gaskill	36,609
Cultivators	A. W. Olds	36,724
Cultivators	W. H. Jordan	36,785
Cultivators	C. Roberts	36,859
Cultivators	A. M. Black	36,889
Cultivators	G. M. Clements	36,894

Invention or Discovery.	Name of Patentee.	No.
Cultivators	D. C. Colby	36,895
Cultivators	C. W. Taliafarro	36,922
Cultivators	J. L. Ellis	36,945
Cultivators	B. and C. Turner	36,948
Cultivators	C. B. Ingersoll	36,998
Cultivators	W. Nevins	37,005
Cultivators	C. Roberts	37,009
Cultivators	C. Roberts	37,010
Cultivators	L. B. Waterman	37,019
Cultivators	L. H. Doyle	37,089
Cultivators	H. I. Heaton	37,166
Cultivators	J. Danner	37,219
Cultivators	W. S. Weir, jr	37,251
Cultivators, Hand	J. D. and A. M. Halsted	35,313
Cultivator and drag combined	H. H. Christie	36,892
Cultivator and potato-digger	C. P. Gross	35,371
Cultivators and seed drills	A. B. Travis	34,918
Cultivator and seeding machine, Combined	A. P. Durant	35,306
Culverts	C. McIntire	36,472
Cup, Drinking	J. S. Ostrander	35,777
Cups for elevators of flouring mills	L. B. Prindle	35,111
Cups for washstands, &c., Soap	J. H. Mead	35,321
Cups, dippers, &c., Manufacture of elastic	T. Smiths	37,181
Cupola and dome, Shot-proof	A. C. Currier	36,896
Curtain fixtures	T. C. Richards	34,593
Curtain fixture	S. S. Putman	35,779
Curtain fixture	S. S. Putman	36,366
Curtain fixture, Cord-tightener for	E. M. Judd	36,094
Cushions, Lining billiard	L. Wacker	35,851
Cushions to prevent sunstroke, Head	W. H. Richards	35,707
Cushions for shuttle boxes	S. Boorn	35,808
Cut-off gear for steam engines, Variable	J. Tremper	37,063
Cutters, Bung	C. Van Derzee	35,741
Cutters, Button-hole	E. Stern and J. S. Newell	37,115
Cutters, Feed	R. McCain	34,154
Cutters, Hay or feed	J. R. Whittemore	36,316
Cutters, Hay and straw	F. Pohlman	35,468
Cutter, Meat	J. G. Perry	37,053
Cutter, Sod	C. E. Stellers	36,945
Cutters, Straw	W. G. Hermance	34,573
Cutters, Straw	D. H. Whittemore	35,121
Cutters, Straw	L. Parker	35,702
Cutters, Straw	J. McLaughlin	35,898
Cutters, Straw and hay	S. C. Stetson	34,076
Cutters, Straw and hay	C. D. Ingraham	35,900
Cutters, Straw, and corn-sheller, Convertible	S. J. Taylor	34,533
Cutters for sugar-cane	W. H. White	36,120
Cutters, Vegetable	J. R. Robertson	35,839
Cutters, Vegetable	R. H. Peck	36,194
Cutters, Vegetable and root	H. Farmer	34,418
Cutter or bait mill, Fish	N. Richardson	35,470
Cutters or sleighs, Iron	A. Butchard	34,190
Cutter attachment to ploughs	J. Long	34,893
Cutting up composition ornaments used for picture and mirror frames, architectural purposes, &c., Device for.	R. J. Marcher	36,416
Cutting cork into strips	C. Gregor	34,716
Cutting cork for stoppers	J. D. Crocker	34,741
Cutting trees and logs	W. Ackerman	34,933
Cutting veneers, Machines for	W. H. Doane	34,566
Cylinder for grain scouring and threshing machines.	J. A. Welsh	34,617
Cylinders, Hydraulic	D. Fitzgerald	37,195
Cylinders for machine cards	C. E. Brownell	34,734
Cylinders for polishing gunpowder	R. H. Cunningham	36,320
Cylinders, Wringing machine	S. A. Bailey	35,073

Invention or Discovery.	Name of Patentee.	No.
D.		
Dampers	H. B. Thomas	34,925
Dampers	G. Chilson	35,080
Dampers	W. Sanford	35,179
Dampers	S. R. Bran	35,500
Dampers	G. Tainter	36,679
Dampers, Stove	G. Cessford	34,660
Dampers in stoves, Operating	O. Paddock	34,446
Dampers, Ventilating	G. Tainter	35,269
Damper regulator, Fire	W. Webster	36,252
Dams	J. Dubois	36,342
Decanter or eruit	A. H. Newton	34,899
Dentist pins	F. W. Smith	34,616
Dermopathic instrument	J. Firmenich	34,677
Desk, School	J. S. Rankin	34,448
Desk, Writing	A. J. Ritter	35,781
Detector, Low water	S. W. Warren	36,741
Dials, Sun	P. Flechet	35,225
Dies for cutting bevelled soles for boots and shoes.	L. S. Graves	35,874
Dies for manufacturing brass kettles	O. Newton	34,374
Diggers, Rotary	E. Gordon	34,751
Diggers, Potato. (See *Potato-Diggers.*)		
Digging machine	N. Badger	34,473
Dippers, cups, &c., Manufacture of elastic	T. Smith	37,181
Distilling coal-oil and other substances	H. W. C. Twedle	34,324
Distilling and evaporating, Apparatus for	W. R. King	34,062
Ditching machine	B. Tobias	35,403
Ditching machine	N. Kidder	35,736
Ditching machines	O. Doolittle	36,511
Domes	W. Rumbold	35,630
Dome or cupola, Shot-proof	A. C. Currier	36,896
Doors, Device for closing	D. J. Stagg	34,075
Doors, Fastenings for chamber	J. P. Frazer	36,563
Doors for reverberatory and other furnaces	C. H. Burgess	34,401
Doors, Stove	J. Spear	35,551
Doors, Weather strips for	C. Merrit	35,424
Doors and gates, Weight and lever attachment for.	A. S. Blake	35,988
Door knobs to their spindles, Attaching	G. N. Cummings	35,924
Door knobs to their spindles, Fastening	D. Skidmore	35,899
Door plates and card receiver	S. A. Baldwin	36,388
Dough under pressure, Apparatus for measuring out and discharging.	J. Perry	35,837
Dowelling	P. Jones	34,835
Draughting ladies' dresses, Instruments for	H. A. Fowler	35,226
Drag and cultivator, Combined	H. H. Christie	36,892
Drain, roller, and moulds, Combined	F. B. Fournier	34,327
Dredging machine	J. H. Newcomb	35,324
Dresses, Instruments for draughting ladies'	H. A. Fowler	35,226
Dress protector	E. Higgins	36,125
Drill, Combined harrow and seed	J. A. Underwood	36,739
Drills, Grain	H. L. and C. P. Brown	35,500
Drills, Grain	J. S. De Haven	35,510
Drills, Grain	J. Smith	35,634
Drills, Grain	W. Ballard	36,554
Drills, Grain	D. J. Powers	36,966
Drills, Grain	J. Smith	36,969
Drills, Hand	E. Beeman	36,135
Drills, Mining	H. Burk	34,941
Drills, Seed	J. H. Thomas and P. P. Mast	35,636
Drills, Seed	S. Keeler and J. Barthel	36,567
Drills, Seed coverers for grain	J. S. Gage	36,291
Drills and cultivators, Seed	A. B. Travis	34,918
Dye, Hair	G. C. G. Saur	35,840
Dyeing and printing with aniline colors	N. Lloyd and J. G. Dale	34,840

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E.		
Electrical instruments for medical purposes	A. Paige	36,231
Electro-plating iron and other metals with copper.	J. E. Walcott	34,470
Electro-plating iron, steel, &c	C. Beslay	36,750
Electro-plating steel wire for piano strings and other purposes.	M. Miller, jr	34,640
Elevating machine	D. L. Miller	34,440
Elevator	O. P. Hatfield	34,572
Elevators, Floating grain	A. B. Nimbs	36,193
Elevators of flouring mills, Cups for	L. B. Prindle	35,111
Elevators, Hay	J. M. Taber	35,045
Elevators, Hay	M. D. Myers	35,887
Elevators, Hay	N. Palmer	36,572
Elevators, Water	J. Hayden	34,145
Elevators, Water	O. D. Eckerson and C. Watson	34,354
Elevators, Water	J. W. Wheeler	34,398
Elevators, Water	G. M. Zell	34,607
Elevators, Water	A. F. Gray	34,629
Elevators, Water	H. Morse and D. Perry	34,641
Elevators, Water	W. R. Cunningham	35,013
Elevators, Water	I. Sherwood	35,113
Elevators, Water	J. S. Brown	35,295
Elevators, Water	A. H. French	35,369
Elevators, Water	H. Nash	35,386
Elevators, Water	S. M. Washburn	35,405
Elevators, Water	S. L. Avery	35,578
Elevators, Water	A. Warren and J. W. Martin	35,794
Elevators, Water	G. Race	35,891
Elevators, Water	J. D. Christie	36,071
Elevators, Water	L. J. Adams	36,189
Elevators, Water	J. Hayden	36,300
Elevators, Water	G. W. Woodworth	36,318
Elevators, Water	W. H. Babcock	36,330
Elevators, Water	A. Johnson	36,409
Elevators and conveyers, Water	G. A. Poppy and C. H. Colegrove	36,792
Elevators and dryers, Floating grain	D. C. Smith and W. P. Walling	35,183
Elevator bins, Distributing grain in	J. W. Sykes	34,992
Embroidery, Imitation metal	W. O. Strong	34,379
Enamel for leather	J. S. Smith, jr	34,907
Engines, Air	C. W. Held	34,366
Engines, Air	J. R. Peters	36,964
Engines, Air, Hot	W. Denkman	37,155
Engines, Air, Hot	T. McDonough	34,155
Engines, Air, Hot	S. H. Roper	34,333
Engines, Air, Hot	S. H. Roper	34,723
Engines, Carding	H. J. Kritser	36,008
Engines, Carding	J. Tilton	34,138
Engines, Carding, Condensing	H. Storms	36,923
Engines, Carding, Sliver guides for	I. Stoad	35,114
Engines for city railroads	H. Kent	34,508
Engines, Fire, on locomotives	A. Irwin	36,352
Engines, Fire, Steam	D. Williams	35,053
Engines, Locomotive, Traction for	M. R. Clapp	34,087
Engines, Pumping	T. Selleck	36,486
Engines, Rotary	S. Harrison	36,089
Engines, Rotary	M. W. Baldwin	34,190
Engines, Rotary	J. B. Root	34,375
Engines, Rotary	J. B. Root	34,376
Engines, Rotary	J. Clayton and A. Campbell	34,393
Engines, Rotary	W. H. Devalin	34,414
Engines, Rotary	J. Platt	34,981
Engines, Rotary	W. W. Verdin	35,640
Engines, Steam	C. Monson	36,164
	J. F. Allen	35,068

Invention or Discovery.	Name of Patentee.	No.
Engines, Steam	A. Judd	35,826
Engines, Steam	J. E. Atwood	36,985
Engines, Steam	W. D. Andrews	37,030
Engines, Steam	H. Walters	37,186
Engines, Steam, Automatic stop motion for	H. B. Beckman	36,699
Engines, Steam, Circulator for	W. A. Lighthall	35,615
Engines, Steam, Condensing	G. H. Reynolds	37,077
Engines, Steam, Crank and cross-head connection for.	J. S. Barden	34,400
Engines, Steam, Governor connections for	T. Carpenter	34,877
Engines, Steam, Link motion for	J. F. Allen	35,070
Engines, Steam, Method of heating feed-water for.	F. B. Stevens	35,714
Engines, Steam, Oiling slides of	T. Carpenter	34,876
Engines, Steam, Oscillating	F. Murgatroyd	34,161
Engines, Steam, Oscillating	W. D. Andrews	36,885
Engines, Steam, Packing for	J. L. Bates	36,987
Engines, Steam and other, Packing for	W. Peters	34,283
Engines, Steam, Pistons for	A. J. Scoville and A. H. Clercq	34,552
Engines, Steam, Pistons for	S. M. Seley and P. Hopkins	35,711
Engines, Steam, Refrigerators for	W. A. Lighthall	35,162
Engines, Steam, Variable cut-off gear for	J. Tremper	37,063
Engines, Tractermotive	N. W. Wheeler	34,471
Engines, Water	L. Eames	36,398
Engraving machines	J. S. Ives	37,235
Envelopes	J. W. Wilcox	34,927
Envelopes, Drying pasted	J. Armstrong	34,326
Envelopes, Picture	E. L. Wilson	35,861
Envelope, Post office way-bill	M. P. Norton	35,539
Envelopes for sewing needles	G. P. Farmer	35,596
Envelope machines, Counting attachment for	G. R. Reay	37,199
Eraser and pencil sleeve, Combination of	F. E. Oliver	35,467
Essences, Vessel for extracting	O. Ernst	35,747
Evaporating by means of steam, Apparatus for	R. W. Bender	36,267
Evaporating saccharine juices	L. J. Whitcomb and W. E. Prall	35,481
Evaporating saccharine juices, Apparatus for	C. D. Stevens	34,991
Evaporating saccharine juices, Apparatus for	W. Thomson	35,047
Evaporating saccharine juices, Portable apparatus for.	A. J. Low	35,880
Evaporating saccharine liquids	M. Harter	35,679
Evaporating saccharine liquids	M. H. Smith	36,924
Evaporating saccharine liquids	P. W. Gates	36,949
Evaporating sugar juices, Apparatus for	M. and S. G. Tufts	34,655
Evaporating and condensing, Apparatus for	J. J. Miller	37,258
Evaporating and distilling, Apparatus for	W. R. King	34,062
Evaporator for saccharine liquids	J. C. McKee	36,849
Evaporators for saccharine and other liquids	P. D. Wesson	36,926
Evaporator for saccharine juices	A. Bare	34,728
Evaporator for saccharine juices	O. Clarke and I. Utter	35,081
Evaporator for saccharine juices	E. H. Funk	35,092
Evaporator for saccharine juices	A. Ingalls	35,238
Evaporator for saccharine juices	T. W. McFarland	36,012
Evaporator for saccharine juices	J. Newman	36,851
Evaporator for saccharine juices, Portable	J. R. Webb	35,862
Evaporators, Sugar	J. L. Crowley and L. J. Johnson	36,076
Evaporator, Sugar	J. K. Leedy	36,469
Evaporator, Sugar	N. Z. Potter	36,527
Evaporator, Sugar	V. R. Beach and J. Day	36,749
Evaporator, Sugar, Portable	R. Hamilton	36,294
Evaporator, Sugar juice	G. W. Thompson and A. H. Rogers	36,179
Excavating and grading machines	A. Keith	34,256
Excavating and grading, Machines for	W. F. Grant	34,662
Excavating, ploughing, and grading machines	E. H. and D. R. W. Williams	35,005
Excavators, Sub-marine	J. C. Osgood	36,360
Extracts, Apparatus for obtaining and for leaching tan bark.	W. H. Allen	36,048

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Eyelet machines	H. D. Walcott	35,003
Eyelet machines	T. K. Reed and H. F. Packard	35,962
Eyelet machines	O. G. Critchett	36,191
F.		
Fabrics, Apparatus for bleaching and cleansing textile.	S. Barlow	35,357
Fabric, Water-proof	T. A. Jenkes	34,428
Fabric, Water-proof	J. F. Greene	35,854
Fabrics, Water-proof, Manufacturing	J. F. Greene	35,855
Fan, Automatic	J. McLain	34,066
Fats for rendering them more useful for burning in lamps, lubricating machinery, and other purposes, Treating oils and.	S. Lewis	35,527
Faucets	A. Fuller	34,419
Faucets	W. E. Worthen	35,054
Faucets	A. J. Gove	35,094
Faucets	J. Jaarans and J. G. Rickel	35,450
Faucets	J. McKenna	36,473
Faucets, Weighing	C. H. McAleer and J. Shively	35,530
Feathers, Machine for dressing	A. B. Movey and W. Scarlett	35,773
Feathers, Renovating	A. McKissick and C. M. French	34,975
Feed-racks	F. G. L. Struve	34,793
Felt, cloth, &c., Water-proof coating for	J. Ditto	34,947
Fences	O. L. Edwards and N. Gabel	34,246
Fences	R. A. Smith	34,650
Fences	W. Gibson	35,230
Fences	C. E. Easton	36,605
Fences, Building and coating earth	C. A. Strong	35,268
Fences, Field	W. H. Leech	36,719
Fences, Portable	J. Bickhart	35,581
Fences, Portable	J. M. Wallis	35,793
Fences, Portable	N. Hornaday	36,215
Fences, Portable	E. Gale	36,996
Fence for sheep folds	A. P. Hopkins	36,651
Fertilizers	L. Harper	35,417
Fertilizing composition	J. McA. Gallacher	34,825
Fetters, Animal	M. E. Burlingame	35,991
Fibres from plants, Separating	G. Sanford	35,708
Fibres from plants, Separating	J. A. De Brame	37,081
Files	M. D. Whipple	34,866
Files, Cutting	M. D. Whipple	34,865
Files, Cutting	S. Vanstone	35,130
Filters	C. F. Baxter	34,680
Filters, Portable	J. P. A. Havard and J. B. Bourgoise.	34,492
Filters, Water	G. B. Davis	34,411
Filter, condenser, and heater, Combined	W. A. Lighthall	36,010
Filtering liquids, Centrifugal machine for	H. N. Fryatt	35,441
Fire alarm	J. R. Tunnicliffe	35,050
Fire arms	J. L. Swan	34,911
Fire-arms	C. C. Brand	35,989
Fire-arms, Breech-loading	F. G. Woodward	34,084
Fire-arms, Breech-loading	C. M. Spencer	34,319
Fire arms, Breech-loading	G. W. White	34,325
Fire-arms, Breech-loading	J. D. Greene	34,422
Fire-arms, Breech-loading	B. F. Skinner and A. Plummer, jr.	34,449
Fire-arms, Breech-loading	W. H. Brown	34,561
Fire-arms, Breech-loading	H. Berg	34,739
Fire-arms, Breech-loading	S. W. Wood	34,854
Fire-arms, Breech-loading	C. B. Holden	34,859
Fire-arms, Breech-loading	O. W. Bayley	35,008
Fire-arms, Breech-loading	J. P. Marshall	35,107
Fire-arms, Breech-loading	C. C. Coleman	35,217
Fire-arms, Breech-loading	W. Johnson	35,241

Invention or Discovery.	Name of Patentee.	No.
Fire-arms, Breech-loading	W. H. Elliott	35,284
Fire-arms, Breech-loading	H. Kellogg	35,356
Fire-arms, Breech-loading	J. C. Cooke	35,488
Fire-arms, Breech-loading	B. F. Joslyn	35,688
Fire-arms, Breech-loading	J. Lee	35,941
Fire-arms, Breech-loading	H. O. Peabody	35,947
Fire-arms, Breech-loading	F. W. Howe	36,466
Fire-arms, Breech-loading	B. S. Roberts	36,531
Fire-arms, Breech-loading	M. Moses	36,571
Fire-arms, Breech-loading	W. Terry	36,681
Fire-arms, Breech-loading	E. Guyn and A C. Campbell	36,709
Fire-arms, Breech-loading	J. V. Meigs	36,721
Fire-arms, Breech-loading	S. Howard	36,779
Fire-arms, Breech-loading	J. C. Nye	36,852
Fire-arms, Breech-loading	S. Bostwick and C. G. Sargent	36,891
Fire-arms, Breech loading	F. Wesson	36,925
Fire-arms, Breech-loading	J. W. Armstrong and J. Taylor	37,025
Fire-arms, Breech-loading	I. M. Milbank	37,048
Fire-arms, Breech-loading	S. Strong	37,206
Fire-arms, Breech-loading, Cartridges adapted to.	B. King	34,579
Fire-arms, Breech-loading, Cartridge retractor for.	C. M. Spencer	36,062
Fire-arms, Breech-loading, Gas-check for	J. M. Seymour	35,354
Fire-arms, Breech-loading, Toy.	F. Denzler	35,086
Fire-arms, Cap-priming attachment to	E. D. Seely	35,783
Fire-arms for cutting off cartridges, Muzzle of.	C. H. Bradley	34,235
Fire-arms, Magazine	L. C. Rodier	34,776
Fire-arms, Magazine	J. B. Doolittle	35,996
Fire-arms, Magazine	J. Q. A. Scott	36,174
Fire-arms, Magazine	J. Nichols	36,359
Fire-arms, Percussion cap-primer for	H. R. Jones	35,524
Fire-arms, Projectiles for	D. M. Mefford	34,285
Fire-arms, Projectiles for, Casting	B. A. Mason	34,153
Fire-arms, Repeating	E. M. Judd	34,504
Fire-arms, Repeating	C. Draeger	34,922
Fire-arms, Repeating	E. Maher	35,167
Fire-arms, Repeating	J. N. Smith	35,548
Fire-arms, Repeating	P. J. Jarre	35,685
Fire-arms, Revolving	D. Moore	34,067
Fire-arms, Revolving	W. J. Pitt	34,093
Fire-arms, Revolving	C. R. Alsop	34,226
Fire-arms, Revolving	C. E. Sneider	34,703
Fire arms, Revolving	C. R. Alsop	34,803
Fire-arms, Revolving	J. A. Whalen	35,052
Fire-arms, Revolving	E. Allen	35,067
Fire-arms, Revolving	A. C. Vaughan	35,404
Fire-arms, Revolving	C. W. Hopkins	35,419
Fire-arms, Revolving	L. W. Pond	35,623
Fire-arms, Revolving	J. H. Vickers	35,657
Fire-arms, Revolving	G. W. B. Gedney	35,999
Fire-arms, Revolving	C. C. Brandt	36,505
Fire-arms, Revolving	H. S. Rogers	36,861
Fire-arms, Revolving	S. W. Wood	36,984
Fire-arms, Revolving	T. J. Mayall	37,004
Fire-arms, Revolving	J. Rupertus	37,059
Fire-arms, Revolving	J. Jenkinson	37,075
Fire-arms, Revolving	A. T. Freeman	37,091
Fire-arms, Tiges for	D. A. Hopkins	36,464
Fire-arms, Tompion for	R. Kinsley	34,430
Fire-arms, Tompion for	A. Tracy	34,705
Fire-arms, Wad for ordnance and other	E. D. Williams	35,273
Fire damper regulator	W. Webster	36,252
Fire escapes	W. Sawyer	35,413
Fire escapes	A. Shuto	36,032

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Fire in the hold of ships, vessels, &c., Extinguishing.	C. Godfrey	36,515
Fishing rods, Tips for	J. Van Hope	35,339
Flask for cast-iron pipes	J. Firth and J. Ingham	37,037
Flasks, Fastening covers to vulcanizing	G. E. Hayes	35,821
Flax cleaning and dressing machine	J. E. Crowell	36,075
Flax and hemp, Breaking	G. Sanford and J. E. Mallory	34,779
Flax, hemp, &c., Breaking	G. Sanford, J. E. Mallory and C. P. Hayes.	36,675
Flax or hemp, Breaking and cleaning	G. Sanford and J. E. Mallory	34,698
Flax and hemp, Breaking and cleaning	G. Sanford and J. E. Mallory	35,710
Flax and hemp, Breaking and cleaning	G. Sanford and J. E. Mallory	36,485
Flax and hemp, Breaking and cleaning	G. Sanford and J. E. Mallory	36,674
Flax or hemp, Breaking and dressing	G. Sanford	34,697
Flax and hemp for cording, Preparing	C. Beach	36,551
Flax and hemp, Dressing	G. Sanford	35,709
Flax and hemp to make them resemble cotton, Treating.	J. P. Camby	34,619
Flax and hemp, Scutching	G. Sanford and J. E. Mallory	34,781
Flocks, Cutting	J. Chase	36,642
Floor cloth, &c., Composition for sizing and stepping.	N. B. Powers	36,794
Floor cloths, &c., Composition for use in the manufacture of.	N. B. Powers	36,793
Flour bolts	H. Reichart	35,953
Flour bolts	J. Wister	36,317
Flour packing machine	A. Brown	35,075
Flower stand	J. Crawford	37,070
Fluid, Burning	C. W. Pinkham	34,772
Fluting or ironing machine	M. P. Carpenter	35,138
Food manufactured from the sweet potato	S. R. and S. Andres and McDonough Bucklin.	34,389
Food, Preserving articles of	J. McCall and B. G. Sloper	37,137
Food or beef tea, Concentrated	E. S. Muringer	34,642
Foot lights for theatres, Constructing and arranging.	G. W. Lloyd	35,696
Foot warmer	S. Hunt	35,936
Forceps, Tubular	G. W. Woolley	37,023
Forging apparatus	R. S. Lawrence	34,434
Fork and knife, Construction of	P. Ulmer	34,337
Fork, knife, and spoon cleaning machine	E. & A. Buckman	34,736
Fork, knife, and spoon, Combination of	J. H. Cables	34,718
Fork, spoon, and knife, Combination of	J. W. Hardie and A. S. Hayward	34,098
Fork, spoon, and knife, Combined	A. Neill	34,069
Foundations, Forming sub	C. Pontex and C. L. McAlpine	36,913
Frames, Constructing and attaching iron panels to woodon.	J. Shaefer	36,427
Freestone and marble, Scouring	R. P. Henry	36,650
Freezing and cooling, Apparatus for	A. C. Tairring	35,051
Frilling and crimping, Machines for	C. O. Crosby and H. Kellogg	37,033
Fruits, Concentrating and preserving for use cider and other juices of.	G. Bordon, jr	35,919
Fruit, Preserving grapes and other	E. A. Wible	35,556
Fruit and vegetables, Preserving	E. C. Roberts	35,696
Fruits, &c., in sealed cans, Preserving	H. B. Slaughter	36,921
Fruit gatherer	B. Tukey	35,717
Fruit gatherers	A. W. Brinkerhoff and A. T. Barnes	36,334
Fruit gatherers	J. Evans	36,834
Fruit jar	T. G. Otterson	36,853
Fruit strainer	D. O. Flanagan	34,590
Fuel, Apparatus for economizing	W. Levin	34,891
Fuel, Apparatus for using mineral oils in	D. Dick	36,769
Fuel, Artificial	M. Mann	35,427
Fuel, Artificial	S. Seymour	36,305
Fuel box and washing apparatus with settees, Combination of.	M. Bishop	35,210

Invention or Discovery.	Name of Patentee.	No.
Funnels, Pendent measuring	G. A. Keene	35,613
Funnel measure	G. A. Keene	36,095
Furnaces	J. Ekin	34,714
Furnaces, Air heating	R. L. Bate	34,856
Furnaces for coal oil stills	J. Reese	35,838
Furnaces, Doors for reverberatory and other	C. H. Burgess	34,401
Furnaces, Glass	A. K. Hay	35,314
Furnaces for heating scythes, &c	L. C. Palmer	34,589
Furnaces, Hot air	C. B. Sawyer	34,699
Furnaces, Hot air	W. Sanford	35,180
Furnaces for the manufacture of oxide of zinc	J. Wharton	37,190
Furnaces for retorts, stills, &c	C. Brison	35,212
Furnaces for roasting ores	R. B. Norman	34,901
Furnace for roasting ores and for other purposes.	J. Jonkins and H. Weissenborn	36,954
Furnaces, Steam boiler	J. H. Connelly and J. W. Phillips	34,198
Furrowing and marking land	J. R. Dikeman and J. J. Hewlett	35,087
Fuse, Manufacturing safety	R. Uren, T. Dunstone, and J. Blight.	37,079
Fuse for explosive shells	B. F. Sturtevant	36,037
Fuse for explosive shells	B. F. Sturtevant	36,038
Fuse for explosive shells	B. F. Sturtevant	36,039
Fuse for explosive shells	F. Alger	36,329
Fuse for explosive shells, Combined time and percussion.	S. and A. M. Sawyer	36,172
Fuse for explosive shells, Concussion	B. B. Hotchkiss	35,611
Fuse for explosive shells, Concussion	J. P. Schenkl	36,236
Fuse for explosive shells, Percussion	B. B. Hotchkiss	36,465
Fuse for explosive shells, Percussion	J. P. Schenkl	36,576
Fuse for shells, Combined time and concussion	W. S. Smoot	36,806
Fuse for shells, Combined time and percussion	F. Alger	36,553
Fuse for shells, Concussion	W. W. Hubbell	36,566
Fuse for shells, Concussion	S. R. Russell	37,200
Fuses for shells, Time and concussion	J. P. Schenkl	35,897
Fuse or slow match for igniting powder under water, Composition of.	T. K. Anderson	34,233
Fuses or trains, Construction of	E. Gomez	34,057
G.		
Gaiters	H. B. Goodyear	34,140
Garments, Constructing	T. S. Lambert	34,464
Garments, Cutting	F. H. Moore	34,766
Gas, Apparatus for carburetting	J. A. Bassett	34,557
Gas, Carburetting	J. A. Bassett	35,984
Gas, Illuminating	A. P. Pitkin	34,773
Gas, Illuminating, Making	L. L. Hill	35,610
Gas, Illuminating, Manufacture of	J. E. Thompson	35,336
Gas, Illuminating, Manufacture of	W. H. Gwynne	36,002
Gas, Illuminating, Manufacture of	J. A. Bassett	36,254
Gas, Illuminating, Manufacture of	J. T. Thomson	36,627
Gas, Illuminating, Manufacture of	M. Levy	37,101
Gas, Illuminating, Manufacturing	A. Walton and J. L. Kite	34,185
Gas, Illuminating, Portable apparatus for manufacturing.	G. H. Kitchen	36,096
Gas, Illuminating, Preparing petroleum for the manufacture of.	T. Clough	36,453
Gases for illuminating and other purposes, manufacture of.	J. A. Bassett	35,807
Gas, Making water	W. H. Gwynne	34,632
Gas, Manufacture of oxygen	J. Webster	35,742
Gases, Mixing	A. Walton	34,994
Gas compensator	P. W. McKenzie	34,582
Gaslights, Means of extinguishing	O. S. Judd	35,595
Gas regulators	H. C. Sergeant	34,985
Gas regulators	J. Edson	35,146

Invention or Discovery.	Name of Patentee.	No.
Gas regulators	W. Grover	36,348
Gas regulators	F. H. Brown	36,940
Gates	E. Kemper	35,689
Gates	J. Woodward	36,817
Gates	J. Brickhart	37,083
Gates, Carriage	J. Ellis	34,247
Gates, Device for closing	W. Gilfillan	36,647
Gates, Device for closing	L. Kolloff	37,001
Gates, Valves or wickets for canal lock	G. Heath	35,756
Gates for water-courses, Stock	W. Donnon	35,591
Gates and doors, Weight and lever attachment for.	A. S. Blake	35,988
Gauge, Carpenter's bench	F. A. Trant	36,973
Gauges for carriage axles	H. Harper	36,951
Gauge, Steam	G. H. Dodge	35,871
Gauge, Steam, Thermometrical	E. A. L. Roberts	36,304
Gauges for steam boilers, Water	M. D. Whipple	36,581
Gauge for temperatures, Fusible	B. W. Franklin	34,203
Gauge wheel combined, Revolving extension collar and	W. H. Willard	37,065
Gearing for machinery	S. P. Gary	37,165
Generating apparatus, Steam	J. E. Culver	36,643
Generator, Steam	J. A. Fanshaw and J. A. Jaques	35,595
Generator, Steam	J. Battin	35,865
Generators, Steam	G. H. Corliss	36,281
Generators, Steam	H. M. Paine	36,440
Girders for bridges, Truss	S. D. Kendall	34,209
Girders for bridges, Truss	A. McGriffie	34,311
Glass, Looking	H. Willard	35,344
Glass, Window sash, setting in	S. Coon	34,244
Glass ware in bas-relief, Hollow	J. S. and T. B. Atterbury and J. Reddick.	35,429
Glassware, Hollow	J. S. and T. B. Atterbury and J. Reddick.	34,345
Glassware, Hollow	J. S. and T. B. Atterbury and J. Reddick.	35,430
Glassware, Moulds for	J. S. and T. B. Atterbury and J. Reddick.	34,555
Globes, School	J. R. Agnew	35,498
Globes, School	J. R. Agnew	36,387
Gloves, Composition for cleaning	M. J. Pulte	33,706
Gold, Amalgamating. (See also *Amalgamator.*)	F. N. Dubois	34,948
Gold, Collecting and amalgamating fine particles of.	A. B. Crosby and J. Ladd	36,557
Gold and silver, Amalgamating	J. Hoeniger	35,876
Gold and silver, Amalgamatory machine for	T. Varney	35,904
Gold and silver amalgam, Straining	T. Varney	34,708
Gold washer	J. Cunfield	34,738
Governor	J. S. Howell	37,230
Governor, Centrifugal	J. M. Dillon	35,589
Governors, Centrifugal	T. R. Pickering	36,621
Governors, Centrifugal	J. Tremper	37,064
Governor, Hydraulic	J. E. Gillespie	34,055
Grading and excavating, Machines for	W. T. Grant	34,662
Grading and excavating machines	A. Keith	34,256
Grading, ploughing, and excavating machines	E. H. and D. R. W. Williams	35,005
Grain, Automatic machines for weighing	C. G. Case and J. M. Baker	34,478
Grain, Cutting the band of	A. J. Luckey	34,973
Grain, Device for spreading	H. H. Beach	35,916
Grain in elevator bins, Distributing	W. O. Strong	34,379
Grain, Gathering and binding	M. L. Baker	34,934
Grain, Lifting and bagging	E. L. Seymour	36,176
Grain, Mode of filling bags with	L. Eggleston	36,772
Grain, Raking and binding	A. S. Harding	34,999
Grain, Scouring and cleaning	B. T. Trimmer	36,541

Invention or Discovery.	Name of Patentee.	No.
Grain, Stirring, conveying, and cooling	J. B. Wheeler	35,271
Grain and similar substances, Drying	D. C. Rand and M. Wadhams	35,469
Grain, &c., Hoppers of machines for sowing broadcast.	J. H. Brinton	35,920
Grain binders	W. P. Baker	37,123
Grain bins	W. S. Sampson	34,164
Grain bins	G. H. Johnson	37,134
Grain bins	W. S. Sampson	37,139
Grain cleaners	J. Simpson and W. Hayden	36,676
Grain cleaners	G. B. Bailey	37,031
Grain cleaning machine	W. H. Waldby	36,250
Grain dryers	M. C. Cogswell and A. G. Williams.	34,405
Grain elevators and dryers, Floating	J. W. Sykes	34,992
Grain scouring and threshing machine, Cylinder for.	J. A. Welsh	34,617
Grain separators	J. and E. C. Nichols and D. Shepard	34,071
Grain separators	W. Wicken	34,279
Grain separators	J. Felsing	34,824
Grain separators	C. Bergen	35,134
Grain separators	G. Leach	35,421
Grain separators	W. W. Dingee and A. B. Farquhar	35,590
Grain separators	J. J. Palmer and A. Plamondon	35,701
Grain separators	L. Patrie	35,739
Grain separators	A. Gordon	36,611
Grain separators	C. Katham	36,653
Grain separators	J. L. Booth	36,830
Grain separators	T. W. Irwin	36,980
Grain separators	J. B. Barcalo	37,062
Grain separators	A. Rowe	37,111
Grain separators	M. Burr	37,148
Grain separators and straw carriers	W. K. Osborn	35,250
Grain and straw separators	S. Huson	36,467
Grain and straw separators	A. B. Davis	37,154
Grain and smut-clearing machine	A. E. Teal and W. Ranson	36,311
Grain threshers	W. F. Cochrane	37,130
Grain threshers and separators	W. F. Cochrane	34,131
Grain threshers and separators	W. F. Cochrane	34,132
Grain threshers and separators	W. F. Cochrane	34,133
Grain threshers and separators	W. F. Cochrane	37,125
Grain threshers and separators	W. F. Cochrane	37,126
Grain threshers and separators	W. F. Cochrane	37,127
Grain threshers and separators	W. F. Cochrane	37,128
Grain threshers and separators	W. F. Cochrane	37,129
Grain threshers and separators	W. F. Cochrane	37,131
Grain threshers and separators	W. F. Cochrane	37,132
Grain of wood, Process for imitating the	G. F. Degelow	36,456
Grapes, apples, &c., Expressing the juice of	G. S. Rust	35,896
Grapes and other fruit, Preserving	E. A. Wible	35,556
Grates	C. B. Loveless	36,098
Grate for burning petroleum and other liquid fuel	J. D. Smedley	36,805
Grates for coal stoves and furnaces	W. Hailes	36,950
Grates, Furnace	D. Lasher	34,064
Grates, Sliding	G. W. Walker	34,536
Grates, Stove	A. Brown	34,731
Grates, Stoves	H. C. March	36,055
Grates for stoves	W. L. McDowell	36,662
Grates, Stoves	E. Harrington	36,952
Grates for stoves	I. Smith	37,204
Grate bars	P. Griffith	36,083
Grater, Nutmeg	G. L. Witsil	35,192
Grindstones, Machine for turning off	J. Thierry	35,553
Grindstones, Making	J. Baldwin, jr	34,124
Grubbing machines	A. McKenney	34,439
Grubbing machines	D. C. Payne	36,022
Guards for lanterns	W. H. Pierce	34,447

Invention or Discovery.	Name of Patentee.	No.
Guides for creasing tucks and plaits preparatory to sewing.	W. L. Fish	34,357
Guns, Air	E. Lindner	37,173
Guns, Apparatus for using submarine	R. Montgomery	35,247
Gun, Centrifugal	G. C. Eaton and S. W. Turner	37,159
Gun, Centrifugal spring	R. Shaler	36,968
Gun, Magazine	F. Brady and J. C. Noble	34,196
Gun, Needle	T. Turckeler	34,706
Guns, Repeating	C. H. Palmer	37,052
Gun, Revolving battery	R. J. Gatling	36,836
Guns in revolving towers by electricity, Discharging.	T. R. Tunby	35,847
Guns, Rifled muzzle for smooth-bore	C. R. Alsop	37,193
Guns, Rifling of	J. B. Atwater	36,592
Guns. (See also *Fire-arms.*)		
Gun and plough, Combined	C. M. French and W. H. Fancher	35,600
Gun barrels, Manufacture of	S. Hiller	34,361
Gun carriages, Pile or fagot for shoe-rail for	J. L. Lewis	36,223
Gun locks, Cover for	J. B. Leverrick	35,456
Gun-nipple protector	J. Haskins	35,418
Gunpowder, Cylinders for polishing	R. H. Cunningham	36,390
Gunpowder to form cartridges, Treating	R. O. Doremus and B. L. Budd	34,724
Gun stocks	W. Burnett	34,103
Gun stocks, Making	H. W. Oliver	35,775
H.		
Halter, Bridle	G. W. Griswold	35,932
Hames, Adjustable	D. M. Cummings	36,767
Hames, Fasteners for	R. A. Daniels	34,351
Hammers	G. H. Mills and J. M. Hanscom	35,885
Hammers	C. Ball	36,389
Hammers	R. Bocklen and G. W. Schramm	36,829
Hammers, Forging	W. D. Grimshaw	35,309
Hammock cot	J. C. Day	36,768
Handcuffs or shackles	W. V. Adams	35,576
Handles, Auger	W. W. Simrell	36,240
Handles, Auger, Shank socket for	J. M. Horton	35,856
Handles for coffins	B. W. Wooster	34,367
Handles to cutlery, Attaching	J. W. Gardner	37,225
Handles, Knife	S. B. Everitt	36,255
Harness, Channelling tools for making	E. D. Gould	34,421
Harness, Slide for	J. S. Topham	35,049
Harness, Slide for breast straps for	D. Pettingill	37,006
Harness, &c., Process for forming leather straps for.	G. Earl	36,562
Harness reins, Holding	E. C. Mackinney	34,720
Harness tugs, Clasp for	J. S. Gilman	35,995
Harpoon, Rocket	T. W. Roys	35,474
Harrows	N. McCuen	34,516
Harrows	J. C. Conklin	35,487
Harrows	G. Cook	35,563
Harrows	M. Sheldren	35,784
Harrows	W. Grange	36,345
Harrows	J. Delong	36,644
Harrows	C. E. Steller	37,061
Harrows	J. Kelsey	37,234
Harrows, Seed-sowing	J. Davis	36,898
Harrow and seed drill, Combined	J. A. Underwood	37,739
Harvesters	W. Delbitt	34,090
Harvesters	T. D. Davis and J. M. Waldree	34,097
Harvesters	R. Emerson, jr., and F. Graham	34,181
Harvesters	J. Powers and E. M. Smith	34,186
Harvesters	B. F. Ray	34,215
Harvesters	E. Smith	34,219
Harvesters	S. S. Bartlett	34,545
Harvesters	E. P. Russell	34,594

Invention or Discovery.	Name of Patentee.	No.
Harvesters	G. W. Richardson	34,614
Harvesters	J. P. Manny	34,760
Harvesters	J. P. Manny	34,761
Harvesters	J. P. Manny	34,762
Harvesters	S. T. Holly	34,804
Harvesters	J. S. Royce	34,849
Harvesters	W. A. Wood	34,995
Harvesters	J. W. Brown and J. E. Baker	35,009
Harvesters	E. Smith	35,044
Harvesters	S. T. Holly	35,096
Harvesters	R. Hoffhims	35,315
Harvesters	M. and S. Shawver	35,397
Harvesters	J. W. Stout	35,479
Harvesters	D. Zug	35,495
Harvesters	W. A. Wood	35,558
Harvesters	B. H. Smith and G. W. Archer	35,712
Harvesters	W. Van Anden	35,792
Harvesters	J. Geiss, J. Brosins, and W. P. Penn	35,815
Harvesters	L. and J. Miller	35,830
Harvesters	W. P. Penn, J. Geiss, and J. Brosins	35,836
Harvesters	J. A. Whitney	35,852
Harvesters	J. W. Street	35,901
Harvesters	D. Clow	35,923
Harvesters	W. Meigs	35,945
Harvesters	R. M. Davis	35,970
Harvesters	C. Newhall	36,017
Harvesters	D. Snell	36,034
Harvesters	J. H. and A. E. Redstone	36,258
Harvesters	W. Van Anden	36,430
Harvesters	R. Hance	36,460
Harvesters	G. B. and C. B. Garlinghouse	36,775
Harvesters	J. M. Grash	36,780
Harvesters	J. Rymarson	36,800
Harvesters	S. Johnston	36,843
Harvesters	S. Hull	37,073
Harvesters	D. Warren	37,187
Harvesters	A. L. Darby	37,253
Harvesters for broom corn	J. O. Norton	36,668
Harvesters, Corn	R. Yielding	35,907
Harvesters, Corn	A. R. Burdick and C. D. Read	35,921
Harvesters, Corn	H. Williams	36,046
Harvesters, Corn	S. Johnston	36,848
Harvesters, Cutting apparatus for	A. R. Reese	35,040
Harvesters, Cutting apparatus for	W. A. Wood	37,066
Harvesters, Finger beams for	A. R. Reese	35,041
Harvesters, Guard finger for	M. B. Riggs	34,267
Harvesters, Guard fingers for	M. B. Riggs	36,796
Harvesters, Rakes for	J. H Mears	34,584
Harvesting machines	W. A. Wood	36,047
Harvesting machines	L. and J. Miller	37,049
Hats	W. E. Doubleday	36,284
Hats, Dies for forming	R. T. Wilde and S. H. Lyon	36,927
Hats, Felting	W. H. Hoyt	34,963
Hats, Military	W. F. Warburton	34,538
Hats, Pressing	J. S. Giles, W. Halladay, & J. A. Rue	37,255
Hats, Pressing and ironing	H. A. Robison	35,954
Hats, Sweats for	B. W. Fay	36,344
Hats, Sweat bands for	W. Burgyes	35,011
Hats, Sweat leather ventilators for	H. Curtis and A. Tufts	35,672
Hats, Ventilators for	P. N. Horseley	35,446
Hats and bonnets, Fabric for	H. Loewenberg	36,097
Hat shell irons	J. P. Kettell	34,838
Hay, Loading and pitching	J. S. De Haven	36,208
Hay, Machines for stacking	W. M. Mason	34,513
Hay, Spreading and turning	G. Moody	36,791
Hay-loading machine	J. W. Foust	36,947

Invention or Discovery.	Name of Patentee.	No.
Hay-rigging	O. Reed	35,369
Heaters	G. Joslin	34,503
Heaters	W. H. Seyeour	34,785
Heaters	J. H. Simmonds	35,043
Heaters	J. Carton	35,216
Heaters	S. A. Briggs	35,294
Heaters	C. H. Frost	35,440
Heaters	M. Pond	35,541
Heaters	S. B. Sexton	35,632
Heaters	N. A. Boynton	36,989
Heaters	J. Magee	37,027
Heaters	J. C. Henderson	37,298
Heaters to cheese vats, Valves to	H. A. Roe	35,396
Heaters for lamp chimneys	J. B. Greene	36,584
Heaters for passenger cars	G. K. Dearborn	34,280
Heaters for railroad cars	W. Westlake	36,044
Heaters, Sadiron	J. S. Brooks	34,237
Heaters, Sadiron	G. Chilson	35,139
Heaters, Sadiron	W. A. Greene	36,213
Heaters, Sadiron	J. S. Brooks	36,990
Heaters and boilers, Vulcanizing	B. W. Franklin	36,146
Heater, condenser, and filter, Combined	W. A. Lighthall	36,010
Heating apparatus, Feed water	R. W. Hale	36,614
Heating apparatus, Steam	S. F. Gold and W. A. Foskett	36,000
Hedges, Trimming	E. M. Benfield	36,049
Hedge trimming device	T. V. Michols	36,420
Hemp and flax, Breaking	G. Sanford and J. E. Mallory	34,779
Hemp or flax, Breaking and cleaning	G. Sanford and J. E. Mallory	34,698
Hemp and flax, Breaking and cleaning	G. Sanford and J. E. Mallory	35,710
Hemp and flax, Breaking and cleaning	G. Sanford and J. E. Mallory	36,485
Hemp and flax, Breaking and cleaning	G. Sanford and J. E. Mallory	36,674
Hemp or flax, Breaking and dressing	G. Sanford	34,697
Hemp and flax for cording, Preparing	C. Beach	36,551
Hemp and flax, Dressing	G. Sanford	35,709
Hemp and flax to make them resemble cotton, Treating.	J. P. Comby	34,619
Hemp and flax, Scutching	G. Sanford and J. E. Mallory	34,781
Hemp, flax, &c., Breaking	G. Sanford, J. E. Mallory, and C. P. Hayes.	36,675
Hinges, Butt	J. F. Townsend	36,883
Hinges, Butt, Spring	A. Acker	36,976
Hinges for shutters	J. Smith, jr	36,865
Hinges and hooks	F. H. Cuypers	34,565
Hoes	H. C. Rogers	35,627
Hoes, Horse	M. Chandler	34,128
Hoisting apparatus	J. F. Rochow	37,110
Hoisting blocks, Anti-friction bearing of	W. Ducheniere	34,295
Hoisting machines	R. A. Wilder	34,710
Hoisting machines	S. E. L. Crogan	37,026
Holders for bills, notes, &c.	G. K. Snow	36,734
Holders for lamp shades	E. E. Conrad	34,921
Holder for pens, pencils, &c.	J. Jacobs	36,652
Holder, Stair rod	E. C. Wilson	35,345
Holders, Tailors' press-board	D. C. Wilson	36,684
Holders, Tool posts or	C. Wright	34,650
Hooks for fastening garments, Spring	A. Putnam	36,933
Hooks, Snap	R. A. Goodyear	35,931
Hooks and hinges	F. H. Cuypers	34,565
Hoop attachment, Band and skirt	A. K. Young	36,953
Hoop ends in tabs or bustles, Fastening	L. De Forest	36,510
Hop Frames	L. A. Beardsley	35,291
Hoppers of machine for sowing grain, &c., broadcast.	J. H. Brinton	35,990
Horn, hard rubber, &c., Composition substitute for.	R. Hearing	36,406
Horses, attaching to vehicles and detaching them therefrom.	A. Colburn	34,671

Invention or Discovery.	Name of Patentee.	No.
Horses, Cribs for	H. Eddy	36,287
Horses' hoofs, Tools for paring	W. Tansley	35,046
Horse powers	J. M. Blake	34,559
Horse powers	W. Heston	35,060
Horse powers	S. Perry	35,567
Horse powers	W. Rider	35,780
Horse powers	S. M. Feezler	35,973
Horse powers	J. N. Pease	36,477
Horse powers	J. S. Rowell and M. F. Lowth	36,576
Horse powers	W. Pierpont	37,178
Horse powers, Circuit	S. Perry	35,063
Horse powers, Circuit	S. Perry	36,329
Horse powers, Endless chain	I. R. Lawence	36,353
Horse powers, Links for	S. Wheeler	36,378
Horse powers, Tread	S. Perry	35,062
Horse powers and speed regulators for	S. Perry	35,064
Horseshoes	P. Thiry	35,958
Horseshoes, Machine for making	H. Burden	35,746
Horseshoes, Making	T. R. Taylor	36,041
Horseshoes, Making	L. D. Roberts	36,370
Horseshoes, Making	U. Billings	36,390
Horseshoes, Making	J. Neff	36,475
Horseshoes, Vice for holding and swaging	S. B. Skiff	34,796
Horseshoe machines	W. H. Thompson	37,062
Hose and flexible tubes, Manufacture of	H. A. Alden	37,192
House, Metallic	S. J. Seely	37,248
Houses, Portable	J. Burnside	36,701
House, Preserving	W. S. Mabbett	35,943
House, bridge, boat, and wagon body, Combined.	J. C. Adams	34,399
Hubs, Box-setters for wheels	F. W. Dexter	35,015
Hubs, Machine for boring	G. Pearsall and S. A. Garrison	36,573
Hubs, Machines for turning and mortising	E. M. Scott	34,595
Hubs for vehicles	A. Moffitt	36,355
Hubs and journals for carriage wheels	R. W. McClelland	35,531
Hub-mortising machines	E. Joslin and D. L. Gibbs	35,420
Hulling machines	S. Bentz	34,346
Hulling machines	J. M. Hendricks	36,350
Hydrants	S. H. Brown	35,213
Hydrants	G. J. and H. W. Ross	35,473
Hydrants	J. Gibson and M. Heberger	35,515
Hydrants	S. McElroy	36,663
Hydrants, Cut-offs for	E. Bailey	36,319
Hydraulic apparatus	L. Eames	36,397
Hydrocarbon, Apparatus for vaporizing and burning liquid.	O. F. Morrill	35,383
Hydrogen lighter, Döbereiner	J. Taylor and R. W. Brown	36,971
Hydrometers	P. Hogg	35,152
I.		
Ice, Housing and shipping	B. Wise	36,121
Ice, Making	A. T. Twining	34,993
Ice clog	J. J. Starr	36,866
Ice-cream freezer	O. Paddock	36,725
Ice-cream freezer	S. H. Hamilton and C. A. Ashton	36,904
Ice creeper	G. L. Bailey	34,869
Illumination	G. H. Smith	36,689
India-rubber boots and shoes	B. D. Godfrey	34,682
India-rubber heels of boots and shoes	P. Boisset	35,056
India-rubber to pencils, Attaching	W. C. Vosburgh and W. A. Ludden	35,365
India-rubber rolls to metallic shafts, Fastening	G. J. Colby	34,818
India-rubber sword handles	M. C. Bogia	35,292
India-rubber, (See, also, *Caoutchouc and Rubber.*)		
Indicators, Engine	C. W. T. Krausch	36,411

Invention or Discovery.	Name of Patentee.	No.
Indicators, Railroad station	L. E. Smith	34,274
Injector, Gifford's	J. Millholland	35,575
Inkstands	A. P. Griffing	34,299
Inkstands	T. S. Hudson	35,449
Inkstands	S. Slocomb	35,478
Inkwells, Fastening the covers of	G. and H. M. Sherwood	37,113
Iron, Forging and crushing	R. Morrison	34,567
Iron, Manufacture of sheet	J. Dickson	34,294
Iron, Rolls for rolling piles of railroad	J. Thomas	35,281
Iron and other metals with copper, Electro-plating.	J. E. Walcott	34,470
Iron and steel, Converting cast iron into wrought.	J. R. Bradley	34,937
Iron and steel, Manufacture of	A. L. Fleury and C. Adams	35,276
Iron, zinc, and copper, Composition metal of	A. Birkhole	34,021
Irons, Branding and stamping	C. T. Holloway	34,301
Irons, Hat shell	J. P. Kettell	34,838
Irons, Sad. (See also *Sad Irons.*)		
Irons, Smoothing	J. Christy	34,481
Irons, Soldering	A. Wilson	34,799
Iron-clad vessels	R. Montgomery	34,727
Iron tubing, Manufacture of	J. H. Colton	36,140
Ironing or fluting machine	M. P. Carpenter	35,138
Ironing machines	W. T. Nichols	35,034
J.		
Jack, Boot	W. Bourn	36,831
Jacks, Carriage	C. H. Paine	36,587
Jacks, Lifting	I. L. Landis	34,063
Jacks, Lifting	C. B. Conant	34,482
Jacks, Lifting	J. Zimmerman	35,646
Jacks, Lifting	D. Tasig	36,144
Jacks, Lifting	J. M. and R. M. Thompson	36,540
Jacks, Lifting	J. D. Otstot	37,051
Jars, Fruit	J. F. Griffen	36,612
Jars, Fruit, Cover for	H. C. Nicholson	34,976
Jar for provisions, &c	W. Zettle	36,131
Jars and cans, Preserving	G. S. G. Spence	36,970
Joiner's squares	J. Iseman	35,159
Joint fastenings for railroad rails, Making	B. F. Gossin	36,778
Journals, Rolling or frictionless	D. Holmes	34,362
Journals and hubs for carriage wheels	R. W. McClelland	35,531
Journals and journal boxes	J. Stimpson	36,487
Journal boxes. (See *Boxes*, also *Journal.*)		
K.		
Kettles, Dies for manufacturing brass	O. Newton	34,374
Kettles, Tea	J. A. Goewey	35,818
Kettles, Tea, and boilers	T. S. Lambert	35,455
Kettles and other vessels, Discharging liquids from.	A. Brear	35,007
Keys, Watch-chain guards or	C. E. Green	36,754
Kilns, Charcoal	C. T. Harvey	36,090
Kilns for drying lumber	H. W. Oliver	35,700
Knapsacks	J. Short	34,272
Knapsacks	C. E. Sweney	34,336
Knapsacks	J. Bondy	34,560
Knapsacks	J. Rush	34,778
Knapsacks	J. Short	37,203
Knapsacks, Hospital	J. McEvoy	34,117
Knapsacks, Slinging	T. Miles	34,260
Knapsack and atmospheric air bed	C. Linden	36,618
Knapsack and collar	J. E. Atwood	37,146
Knee joints, Artificial	E. Cotty	37,067

Invention or Discovery.	Name of Patentee.	No.
Knife and fork, Construction of	P. Ulmer	34,337
Knife, fork, and spoon, Combined	A. Neill	34,069
Knife, fork, and spoon, Combination of	J. W. Hardie and A. S. Hayward	34,098
Knife, fork, and spoon, Combination of	J. H. Cables	34,712
Knife, fork, and spoon cleaning machine	E. and A. Buckman	34,736
Knife and scissors sharpener	I. S. and J. W. Hyatt, jr	35,652
Knife cleaning box	F. A Salisbury	35,328
Knives, Attaching handles to	M. Chapman	37,150
Knives, Budding	E. D. and R. Gird	34,398
Knives, Hay	J. Fasig	34,356
Knives, Pocket	S. Mason	36,321
Knives, Pocket	J. G. Perry	36,620
Knives, Shoe	W. W. Wright	37,122
Knitting, Burrs for	L. Kavanaugh	35,565
Knitting machines	T. Langham	34,210
Knitting machines	S. T. Thomas	34,852
Knitting machines	J. G. Wilson	36,199
Knitting machines	J. Hollen	36,351
Knitting machines	E. Shore	36,373
Knitting machines	W. B. Evans	37,161
Knitting machines, Circular	G. Campbell	35,968
L.		
Labels to bottles, Attaching	W. N. Walton	36,542
Ladder, Step	J. H. Balsley	34,100
Ladder and staging for artisans	C. Monson	34,313
Ladder and staircase, Folding	C. Monson	34,314
Ladder apparatus, Fire	D. Fobes and H. M. Hartshorn	35,601
Lamps	S. G. Blackman	34,048
Lamps	T. Mayhew	34,065
Lamps	W. S. Thompson	34,080
Lamps	A. Bliss	34,125
Lamps	A. Turnbull	34,277
Lamps	T. J. Barron	34,390
Lamps	E. T. Covell	34,408
Lamps	J. Doedn	34,415
Lamps	W. J Palmer	34,521
Lamps	R. S. Chapin	34,562
Lamps	W. Mentzel and A. and J. W. Geddes.	34,638
Lamps	J. Sangster	34,782
Lamps	T. Reymond	34,904
Lamps	H. C. Hutchinson	34,964
Lamps	E. B. Requa	35,175
Lamps	C. F. Martine	35,349
Lamps	C. T. Chase	35,363
Lamps	C. C. Stansell	35,655
Lamps	C. H. Robinson	35,955
Lamps	C. C. Stansell	35,979
Lamps	M. Rae	36,167
Lamps	S. Marshall	36,226
Lamps	C. W. Cahoon	36,386
Lamps	W. Kneble and H. Beierlein	36,413
Lamps	C. W. Cahoon	36,451
Lamps	L. J. Atwood	36,493
Lamps	P. Hayden	36,649
Lamps	A. Taplin	36,680
Lamps	E. C. Blakeslee	37,068
Lamps	R. Cornelions	37,086
Lamps, Applying reflectors to	G. F. J. Colburn	36,339
Lamps for burning coal-oil	W. Morehouse	34,841
Lamps, Chimney for	E. P. Dickie	34,293
Lamps, Chimneys for	H. Brown	34,733
Lamps, Chimneys to, Attaching	W. Morehouse	34,842
Lamps, Coal-oil	J. Ridge	34,984
Lamps, Coal-oil	J. H. Irwin	35,158
Lamps, Coal-oil	J. N. Smith	36,549

Invention or Discovery.	Name of Patentee.	No.
Lamps, Coal-oil	H. Behn	35,579
Lamps, Coal-oil	G. Y. Custer	36,206
Lamps, Coal-oil	J. White and A. Agnew	36,380
Lamps, Coal-oil	G. L. Witsil	36,755
Lamps, Coal-oil	J. M. Hancock	37,080
Lamps, Coal-oil	D. E. Hall	37,197
Lamps, Coal-oil and other	R. S. Merrill	35,460
Lamps, Fountain	G. W. Harrold	35,875
Lamps, Glass deflectors for	W. H. Mathews	35,061
Lamps, Kerosene	A. Meucci	36,192
Lamps, Kerosene or coal-oil	J. Ridge	37,144
Lamps, Lantern	R. M. Merrill	35,382
Lamps, Lantern	R. M. Merrill	36,570
Lamps, Lighting and trimming	J. Gallagher	35,733
Lamps, Locomotive	S. H. Timmons	34,914
Lamps, Locomotive	I. A. Williams	35,122
Lamps, Miners'	W. Seybold	35,264
Lamps, Night	F. W. Houchin	35,154
Lamps, Placing reservoirs for	C. N. Orpen	36,060
Lamps, Railroad	J. Carton	36,274
Lamps, Railroad	J. Carton	36,602
Lamps, Railways	T. J. Nowland	37,239
Lamps for railway cars, Coal-oil	W. O. B. Merrill	35,534
Lamps, Removing chimneys and filling	J. R. Baker	35,664
Lamps, Safety	J. Defosses	36,341
Lamps, Shade for	C. E. L. Holmes	34,860
Lamps, Shade-holder for gas burners on	G. Wedekind	35,341
Lamps, Snuffers for	R. N. Eagle	36,590
Lamps, Vapor	D. A. Fiske	34,053
Lamps, Ventilator for petrol. oil	S. D. Pinkham	34,039
Lamps, Wicks for	J. H. Connelly and J. Cook	36,277
Lamp cone, Coal-oil	W. Fulton	35,151
Lamp insulator	A. Bliss	37,212
Lamp reflectors	J. T. Williams	35,644
Lamp reflector and chimney protector	G. F. Colburn	35,307
Lamp shade, Clasp for	C. Reichman	34,332
Lamp shades, Holders for	E. E. Conrad	34,921
Lamp shades, Holders for	C. H. Reichmann	36,574
Lamp-shade holder	W. H. Mathews	34,805
Lamp-shade holder	P. A. Stecher	36,308
Lamp tops	C. Dorflinger	36,079
Lamp wick	F. McKee	37,237
Land, Device for cutting marshy	A. McFarlane	34,974
Land and sea, Ascertaining position and direction on.	B. Garvey	34,098
Land leveller	R. Shepard	34,851
Lanterns	G. R. Boynton	35,800
Lanterns	L. C. Ober	35,835
Lanterns	J. H. Irwin	36,841
Lanterns, Coal-oil	J. W. Schreiber	36,371
Lanterns, Guards for	W. H. Pierce	34,447
Lantern, Kerosene	E. G. Tobey	36,198
Lanterns for marine telegraphs	J. W. Moore and W. H. Elliott	35,322
Lanterns, Reflecting	A. E. Young	35,194
Lanterns, Signal	R. Chester	37,032
Lanterns, Wind-breakers for	A. Davis	36,077
Lard, Apparatus for cooling	W. J. Wilcox	37,190
Lasts	W. C. Shipherd	37,114
Lasts, Head block for	C. F. Pollard	37,179
Last, Shoe	N. Jones	36,495
Latches, Door	J. Dearborn	36,207
Latches, Door	A. Rix	36,732
Latches, Gate	J. Ellis	37,098
Lathes, Tool-holders for turning	W. Sellers	36,111
Lathes, Tool-rest for turning	F. A. Pratt	36,479
Lathes, Watchmaker's	G. Jackson	36,842
Lathes, Watchmaker's	E. J. Chapin	36,942

Invention or Discovery.	Name of Patentee.	No.
Leather, Composition for dressing	M. Shaw	34,530
Leather, Enamel for	C. W. Held	34,366
Leather, Machine for pricking	J. H. Walker	34,537
Leather, Pebbling or embossing	B. Merritt, jr	36,228
Leather, Tanning for Morocco and other grain-finished.	W. Bush	34,815
Leather, cloth, &c., Composition for water-proofing	C. G. Smith	35,400
Leather-splitting machine	A. H. Van Geison	35,850
Leather straps for harness, &c., Process for forming	G. Earl	36,562
Leg, Artificial	G. B. Jewett	35,686
Legs, Artificial	T. E. M. White	35,723
Legs, Artificial	G. B. Jewett	35,937
Lemon-squeezer	G. M. Thomas	35,554
Lens for photographic cameras	C. C. Harrison and J. Schnitzer	35,605
Letters, Addressing	J. S. Brown	36,393
Letters on street railroad cars, Collecting	J. B. Murray	35,323
Letters without discovery, Device to prevent opening.	C. S. Westcott	35,342
Letter-box	J. W. Brown	34,940
Leveller, Land	R. Shepard	34,851
Levels, Combined spirit	A. Cahoon, jr	35,298
Levels, Spirit	T. N. Hosmer	36,906
Light-houses, piers, &c., Foundation for	L. Bail	34,474
Lime-spreader and corn-planter combined	M. M. Mackerley	34,438
Linch-pin holes, Machine for punching, and cutting off the journals of axles for wagons, &c.	S. H. Hartman	36,298
Line-holders for mason work, &c	L. A. Green	34,631
Links, Adjustable	C. J. E. Thompson	36,118
Links, Adjustable	J. Hinkley	37,229
Linseed, &c., Crushing	T. Rowe	36,799
Liquids, Aerating	T. Warker	34,916
Liquids, Apparatus for defecating	J. E. Wilson	35,645
Liquids, Apparatus for giving vent to barrels of beer and other.	O. Ernst	36,143
Liquids, Apparatus for testing coal-oils and other mixed.	H. J. Smith and W. Jones	35,184
Liquids, Centrifugal machine for filtering	H. N. Fryatt	35,441
Liquids, Discharging, from kettles and other vessels.	A. Brear	35,007
Liquids for exciting galvanic batteries	M. Vergner	34,656
Liquids, Submitting yarns to the action of	P. Heilmann	34,494
Liquids lighter than water, Burning	A. T. Schmidt	36,917
Liquid measures	T. Rogers	34,526
Locks	E. S. Bennett	34,460
Locks	C. Jagy	35,376
Locks	L. Woodruff	35,912
Locks	J. A. Pimentel and W. H. Shute	36,024
Locks	A. M. Hill	36,053
Locks	J. M. Perkins	36,106
Locks	T. G. Harold	36,124
Locks	W. C. Leach and M. J. Knox	36,221
Locks	J. W. Lyon	36,224
Locks	G. C. Worth	36,547
Locks	H. H. Elwell	36,645
Locks	E. G. F. Arndt and A. Hühne	36,886
Locks	N. McNeale and W. B. Dodds	36,908
Locks	F. G. Shalling	36,919
Locks	J. Farrel	36,946
Locks	S. N. Long	37,135
Locks	J. Adt	37,209
Locks	J. M. Perkins	37,240
Locks, Canal	S. J. Seely	37,265
Locks, Combination	G. M. Phelps	37,241

Invention or Discovery.	Name of Patentee.	No.
Lock for mail-bag	W. W. Gingrich and C. S. Coats	37,164
Locks for mail-bags, Seal	J. R. Boubilla	35,868
Locks, Pad	M. T. Ridout	36,421
Locks, Sash	P. Miles	35,617
Locket and watch cases	C. W. Clewly	34,564
Locomotives, Fire-engines on	D. Williams	35,053
Locomotives, Head-lights for	S. E. Cleveland	35,486
Locomotives, Preventing jarring and jolting of railroad cars and.	R. A. Riley	34,525
Locomotive engines, Signal mechanism for	J. M. Cook	35,032
Looms	A. Stockwell and B. D. Humes	34,451
Looms	J. C. and A. P. Garretson	35,229
Looms	E. Robbins	35,394
Looms	S. Holdsworth	35,445
Looms	S. Boorn	35,918
Looms	W. Reynolds	35,981
Looms	S. Shepard	36,029
Looms	T. Stibbs	36,178
Looms	R. Reynolds	36,529
Looms	J. F. Fosdick	37,223
Looms, Fancy	S. T. Thomas	34,381
Looms, Harness for	H. Parsons	36,166
Looms, Picker, motion for	E. Robbins	34,647
Looms, Picker-staff for	E. Robbins	35,395
Looms, Power	W. Graichen and C. Hoffman	34,141
Looms, Power	T. H. and H. James	34,255
Looms, Power, Harness motion of	D. M. Ayer	36,697
Looms, Power, Take-up motion for	J. Whitaker	36,875
Looms for weaving wire cloth	C. H. Waters	36,377
Lounge, Bedstead and chair	S. A. Skinner	36,441
Lubricating composition	E. E. Hendrick	35,753
Lubricating composition for machinery	E. E. Hendrick	35,754
Lubricators	A. C. Dewes	36,703
Lubricators	H. A. Burr and L. E. Rockwell	37,084
Lubricators, Railroad journal	A. P. Allen	36,133
Lubricators for scroll saw-stocks	J. Richards	36,729
Lubricator for steam-engines	O. H. Dunham	37,036
Lubricator for steam-engines	J. Roscoe	37,245
Lumber, Kilns for drying	H. W. Oliver	35,700

M.

Machinery, Changing speed in	H. V. Butler and J. C. Hoadley	35,729
Malt liquors from becoming flat, Preventing	F. M. Ruschhaupt	34,695
Mangle	C. C. Converse	35,301
Mangle	H. W. Putnam	36,303
Mangle and clothes-wringer combined	J. D. Tifft	35,716
Manure, Spreading	J. H. Stevens	34,790
Marble, Imitation	A. and W. Fischer	34,746
Marble and freestone, Scouring	R. P. Henry	36,650
Marine camels	S. Woolston	36,745
Marker, Reader	T. W. Wisner	35,964
Marking machines	E. Spencer	36,243
Marking and furrowing land	J. R. Dikeman and J. J. Hewlett	35,087
Martingale for preventing horses or mules from throwing or breaking fences, Pricking.	D. and J. Pfouts	36,363
Mason work, &c., Line-holders for	L. A. Green	34,631
Masts and rigging	G. T. May	35,882
Matches, Friction	C. W. Smith	34,649
Matches, Friction, Manufacture and packing of	V. Toepken	36,967
Matches, Tapers, &c., Filling dipping clamps in the manufacture of.	T. Higgins	36,463
Match-safe	A. Kline	34,431
Matching and planing machine combined	W. H. Doane and W. E. Loudon	36,901
Mattress	E. F. Bassett	34,935
Mattress	W. Frohlich	35,732

Invention or Discovery.	Name of Patentee.	No.
Measure, Manufacture of graduated glass	W. Hodgson, jr	34,424
Measures, Rotary disk	E. V. Lawrence	37,002
Measures and buckets	J. Hageman	36,613
Measuring distances, Instruments for	W. H. Chaffee	34,879
Meats, Apparatus for smoking	E. Bickford	35,580
Meats, Salting	T. Spencer	36,735
Meat-chopper	F. C. Heberhart	36,518
Meat-chopper, Rotating	G. W. Dechant	35,014
Meat-cutters. (See also *Cutters, Meat.*)		
Meat-mincing machine	P. Miles	36,229
Medicine for croup	C. Sanborn	34,905
Medicine for miasmatic diseases	J. H. Hascall	35,022
Medicines, Sugar tablets for containing	H. F. Wiesecke	36,816
Melodeons	L. Louis	35,737
Melodeons	B. W. Nicholls	35,033
Melodeons, Coupling for octaves, &c., in	B. W. Nichols	34,588
Metal, Apparatus for bending corrugated plates of.	R. Montgomery	35,496
Metal, Architectural sheet	W. E. Worthen	34,224
Metal of iron, zinc, and copper, Composition	A. Birkhole	34,621
Metal for sheating ships	J. Le Ferre	34,435
Metals, Cutting and planing	D. Saunders	36,803
Metals, Machines for planing	T. F. Rowland	36,624
Metals, Milling and cutting	M. G. Wilder	36,744
Metals, Moulds for casting	C. B. Cotter	36,943
Metals, Preparing metallic moulds for casting	J. Revere	34,524
Metal embroidery, Imitation	J. S. Smith, jr	34,907
Metal plates, Cutting tined implements from	A. Clark	36,993
Meters, Fluid	N. Aubin	35,806
Meters, Gas, Dry	C. Kirk	34,465
Meters, Gas, Dry	J. E. Fisk	34,678
Meters, Gas, Dry	J. Schatt	35,065
Meters, Gas, Wet	J. Cochrane	34,670
Meters, Water	H. Isham	34,060
Meters, Water	H. Isham	34,147
Meters, Water	J. E. Van Winkle and J. Mason	34,173
Meters, Water	G. F. Blake	34,857
Meters, Water	N. Aubin	36,201
Meters, Water	J. S. Barden	36,698
Miasmatic diseases, Medicines for	J. H. Hascall	35,022
Microscopes	H. Craig	34,409
Milk, Apparatus for concentrating	A. S. Lyman	36,354
Milk cooler, Portable	J. M. Sanborn	35,569
Mills, Alarm indicator for grist and flouring	E. Clark	34,130
Mills, Amalgamator and ore	A. B. Paul	35,253
Mills, Apparatus for feeding	J. M. Clark	34,239
Mills, Cider	A. Spencer	35,787
Mills, Cider	P. J. Berlin	37,147
Mills, &c., Convertible apple	G. S. Rust	36,171
Mills for crushing apples, sugar-cane, &c	J. H. Ellis	34,296
Mills, Fanning	A. Hall and J. Foulkner	34,488
Mills, Fanning	J. Miller	35,461
Mills, Fanning	J. Miller	35,462
Mills, Fanning	J. Miller	35,463
Mills, Fanning	F. Miles	35,536
Mills, Fanning	L. Ensign	35,594
Mills, Fish-cutter or bait	N. Richardson	35,470
Mills, Flour, Hopper boys for	W. F. Cochrane	36,583
Mills, Flouring, Cups for elevators of	L. B. Prindle	35,111
Mills, Flouring and grist	E. Clark	34,129
Mills, Fulling	J. McKinzie and J. C. Miller	36,013
Mills, Gig	J. C. Millar	36,550
Mills, Grinding	J. J. Storer and J. D. Whelpley	36,580
Mills, Grinding	O. Sherwood, jr	36,804
Mills, Grinding	E. Clark	36,893
Mills, Grinding	J. M. Clark	37,151

Invention or Discovery.	Name of Patentee.	No.
Mills, Grinding, Metallic	G. Palmer	35,036
Mills, Grinding, Operating	J. Holben	35,444
Mills for metals, Boring	W. Sellers	36,112
Mills, Ore-crushing	J. Moore	35,902
Mills, Saw	E. Guyer	34,684
Mills, Saw	W. B. Burns	34,942
Mills, Saw, Head blocks for circular	S. R. Smith	36,562
Mills, Saw, Self-setting head block for	N. Kimball	35,698
Mills, Saw, Scroll	J. Richards	35,202
Mills, Spice	E. Heath	36,537
Mills, Sugar	T. S. Cox	36,502
Mills, Sugar-cane crushing	A. Ingalls	36,156
Mills, Wind	R. O. Lowrey	35,100
Mills, Wind	J. Myers	35,774
Mill-stones, Balancing	R. Van Orner and W. J. Bell	35,187
Mill-stones, Balancing	W. J. Lamuth	36,009
Mill-stones, Dressing	M. P. Gardner	34,654
Mill-stones, Dressing	J. B. Sackett	34,765
Mill-stones, Dressing	J. Richmond	35,899
Mill-stones, Dressing	J. Dickenson	36,770
Mill-stones, Dressing, training and staffing of.	J. T. Gilmore	36,736
Mill-stone dress	J. Sedgebeer	35,858
Mill-stone dressers	J. E. Karelson	36,748
Mill-stone dresser	Z. G. Hurd	37,007
Mill-stone picks	A. S. Jones	34,966
Mill-stone staff, Millers'	S. Barnes	36,444
Minerals and ores, Process of calcining	B. and N. S. Kerth and A. Behr	36,437
Mirror for attachment to a window, &c	G. P. Bertrand	35,917
Mittens	C. Neuman	35,693
Mixing and stirring apparatus	G. L. Witsil	36,633
Monuments, Construction of	J. M. Martin	35,278
Mop head	M. L. Horton	34,687
Mop head	E. R. and N. F. Reed	35,961
Mortising machine	J. Lemman	35,328
Motion, Changing a rotary into reciprocating	J. H. and A. R. Redstone	35,131
Motion, Converting	C. L. Spencer	34,597
Motion, Converting	W. H. McNary	35,893
Motion, Converting rotary into reciprocating	P. C. Van Brocklin	35,993
Motion, Crank	E. P. Brownell	34,735
Motion, Transmitting and arresting	W. Sellers	34,217
Motive power	W. T. Nichols	37,059
Motor, Water	D. Hemsicker	37,161
Moulds, Brick	J. A. Hamer	34,988
Moulds, Bullet	W. A. Clark	34,944
Moulds, Butter	M. F. Ridout	35,393
Moulds, Carriage for sugar	T. A. Havemeyer and H. Schimitspan.	34,686
Moulds for casting	W. Murdock	35,948
Moulds for casting metals	C. B. Cotter	36,943
Moulds for casting metals, Preparing metalllic	J. Revere	34,524
Moulds for casting ploughshares	C. H. Brady	35,744
Moulds for casting pumps, Metallic	H. Post	34,774
Moulds for cement pipes	H. Knight	34,899
Moulds for cement pipes	H. Knight	35,948
Moulds for glassware	J. S. and T. B. Atterbury and J. Reddick.	34,555
Moulds for making daguerreotype cases	J. L. Baldwin	34,334
Moulds for shot and shells, Forming	P. L. Weimer	35,721
Moulds, Wash or coating for metallic	J. Kinniburgh	34,719
Moulding, Cutting troist	H. Newhouse	34,467
Mouldings, Framing oval	G. Hammer	34,663
Moulding, Weather strip	J. W. Browne	34,458
Mouldings and other purposes, Composition for manufacture of.	H. Loewenberg	34,757
Moulding, sawing, boring, and planing machines	J. H. Post	36,026

Invention or Discovery.	Name of Patentee.	No.
Movement, Application of wind power to produce a reciprocating.	C. C. Moore	36,101
Mowing machines	R. Emerson, jr., and F. Graham	34,180
Mowing machines	J. P. Mamsy	34,763
Mowing machines	E. S. Ritchie	35,263
Mowing machines	S. M. Moore	36,850
Mowing machines, Track-clearers in	A. W. Morse	24,213
Mowing machines. (See also *Reaping machines.*)		
Musical instruments, Operating swells in	G. Woods	36,756
Musket balls, Compressing	P. Naylor	34,844
Musket balls, Compressing	C. S. Bulkley	35,411
N.		
Nails for horseshoes, Making	S. S. Putnam	37,107
Nails for sheathing	W. H. Van Gieson	34,534
Nail machines	G. B. Wiggin and J. W. Hoard	36,629
Needles, Envelopes for screwing	G. P. Farmer	35,596
Needles, Knitting machine	S. Peberdy	35,254
Needles in paper, Machine for sticking	G. P. Farmer	35,748
Needles, Sewing machine	W. O. Grover	34,571
Needles, Sewing machine, Making	J. P. Blake	36,391
Needles, Sewing machine, Making	J. P. Blake	36,392
Needles in sewing machines, Setting and threading.	H. D. Conrad	34,407
Needle cases, Sewing	J. O. Whitcomb	35,004
Nets, Seine, Making	B. Arnold	36,499
Notes, checks, &c., Cancelling	E. M. Scott	34,850
Nozzles for hose and pipes	H. B. Morrison	36,688
Nuts, Making	T. R. Taylor	36,737
O.		
Oats, Screens for separating from wheat	A. C. Freeman	36,053
Observatory, Military	T. Welham	37,207
Oils, Apparatus for distilling petroleum and other.	A. Quinn	36,481
Oils, Apparatus for gasifying and burning carbon.	O. F. Morrill	36,102
Oils, Coal, Apparatus for testing	J. Tagliabue	36,488
Oils, Coal, Can or tank for	C. H. Phelps	36,478
Oils, Coal, Distilling	J. Bullard	34,195
Oils, Coal, Still for	S. G. Clark	34,816
Oils, Coal, Testing	G. Tagliabue	36,826
Oils, Coal, and other mixed liquids, Apparatus for testing.	H. J. Smith and W. Jones	35,184
Oils, Coal, and other substances, Distilling	H. W. C. Twedle	34,324
Oil, Coal. (See also *Petroleum.*)		
Oils as fuel, Apparatus for using mineral	D. Dick	36,769
Oils, Odorizer of Kerosene	S. Jarden	34,577
Oil from, pigs' feet, Extracting	C. Wahl	36,184
Oils to produce a vehicle for paints and varnishes, Treating petroleum and other.	A. Meucci	36,419
Oil, quicksilver, &c., Casks for holding	A. D. Campbell and E. Perce	34,051
Oils, Storing	H. P. Gengembre	34,462
Oils, Vessels for transportation of carbon and other.	R. C. Glyde	34,359
Oils and fats, Mode of treating, for rendering them more useful for burning in lamps, lubricating machinery, and other purposes.	S. Lewis	35,527
Oils, tallow, &c., Extracting	A. Randel	34,722
Oil-cloth, Composition for making	O. C. Washburn	34,453
Oil still	W. G. Warden and T. K. Petty	37,263
Oil tanks	G. W. Howard	34,426
Oil tanks	J. Reese	34,373
Orchestra, Piano	J. R. Schalkenback	35,490

Invention or Discovery.	Name of Patentee.	No.
Ordnance	R. Montgomery	34,666
Ordnance	T. Foulds	35,148
Ordnance	E. Heaton	35,443
Ordnance, Adjustable sights for	C. B. Long	37,076
Ordnance, Apparatus for casting	J. Millholland	35,884
Ordnance, Arranging water tubes for cooling the breech of.	J. Hursh	35,877
Ordnance, Breech-loading	T. C. Rice	34,206
Ordnance, Breech-loading	D. Yeakel	34,388
Ordnance, Breech-loading	R. C. Bristol	34,730
Ordnance, Breech-loading	J. S. Hall	35,095
Ordnance, Breech-loading	W. F. Goodwin	35,311
Ordnance, Breech-loading	E. R. McCabe	35,380
Ordnance, Breech-loading	C. Morrill	35,619
Ordnance, Breech-loading	W. B. Treadwell	35,637
Ordnance, Breech-loading	R. R. Moffatt	35,863
Ordnance, Breech-loading	W. Stow	36,036
Ordnance, Breech-loading	E. A. Turpin	36,325
Ordnance, Breech-loading	G. P. Ganster	36,401
Ordnance, Constructing	D. T. Yeakel	35,124
Ordnance, Construction of	E. D. Baker	34,287
Ordnance, Construction of	B. T. Babbitt	34,472
Ordnance, Construction of	W. Ostrander, J. D. Reeder, and J. Cordman.	34,977
Ordnance, Device for indicating the elevation of	C. B. Long	36,054
Ordnance, Elastic breeches for	H. H. Day	37,035
Ordnance, to facilitate unspiking, Divided vent bushing for.	B. G. Martin	37,257
Ordnance, Hooped	R. P. Parrott	35,171
Ordnance, Mounting	C. T. Brown	36,273
Ordnance, Mounting field	F. A. De Mey	36,457
Ordnance, Operating	J. Ridgway	36,730
Ordnance, Operating	O. Tufts	37,250
Ordnance, Projectiles for	W. & H. H. Mansfield and J. Moorse.	35,103
Ordnance, Projectiles for, Explosive	W. E. Browne	35,503
Ordnance, Projectiles for, Explosive	W. W. Hanes	36,295
Ordnance, Projectiles for, Explosive	W. F. Rippon	36,858
Ordnance, Projectiles for, Hot	C. T. James	34,907
Ordnance, Projectiles for smooth-bored, Rotating.	T. F. Reilly	34,693
Ordnance, Projectiles from smooth-bored, Rotating.	F. Goodrem and C. Jackson	36,001
Ordnance projectiles, Giving rotation to	H. K. Kenyon	36,989
Ordnance, Revolving	N. Taliaferro	34,171
Ordnance, Revolving	B. Franke	35,998
Ordnance, Revolving	M. F. Hardy	36,148
Ordnance, Revolving	J. L. Bonham	36,555
Ordnance, Revolving, Automatic	T. J. Campbell	35,504
Ordnance, Rifled projectiles for	B. S. Alexander	34,091
Ordnance, Rifled projectiles for	W. H. Havens	34,493
Ordnance, Rifled projectiles for	C. W. Small	34,596
Ordnance, Rifled projectiles for	J. L. Henry	35,824
Ordnance, Rifled projectiles for	W. W. Hubbell	35,825
Ordnance, Rifled projectiles for	B. F. Sturtevant	36,116
Ordnance, Rifled projectiles for	A. H. Emery	36,773
Ordnance, Rifled projectiles for	W. H. Smith	37,260
Ordnance, Rifled, Sabot for projectiles of	M. Printer	35,544
Ordnance, Rifled, Shells for	J. M. Connel and J. S. Hall	34,242
Ordnance, Rifled, Shells for	J. P. Rollins	34,268
Ordnance, Rifled, Shells for	H. H. Houghton and C. H. Denison	35,520
Ordnance, Shells for	G. C. Jones	34,302
Ordnance, Shells for	C. Peters	34,979
Ordnance, Shells for, Explosive	W. B. Hubbell	34,059
Ordnance, Shells for, Explosive	J. M. Hathaway	34,685
Ordnance, Shells for, Explosive	M. S. Wickersham	34,798

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Ordnance, Shells for, Explosive	C. T. James	35,521
Ordnance, Shot for, Canister	B. B. Hotchkiss	34,058
Ordnance, Shot for, Canister or case	E. Townsend	34,602
Ordnance, Shot for, Chain	A. B. Ely	34,626
Ordnance, Shot for, Chain	J. Gault	34,628
Ordnance for use under water	J. C. Tilton	35,048
Ordnance, Vent holes of	W. W. Gould	35,019
Ordnance and other fire-arms, Wad for	E. D. Williams	35,273
Ores, Concentrating and cleaning	V. Baron	35,197
Ores, Extracting copper from	F. W. Dähne	35,509
Ores, Stamp heads for crushing	F. Murray	36,302
Ores, Treating copper	H. J. M. Puistienne	34,591
Ores, Apparatus for grinding, and for amalgamating the precious metals.	C. H. Griffin	35,980
Ores of gold, silver, copper, &c., Smelting	W. Quaun	37,198
Ores and minerals, Process of calcining	B. and N. S. Keith, and A. Behr	36,437
Ore crusher and amalgamator	J. Burrell	34,238
Ore separator and washer	J. J. Muller	34,721
Ornaments used for picture and mirror frames, architectural purposes, &c., Device for cutting up composition.	R. J. Marcher	36,416
Ovens	J. Allen and E. Pick	35,661
Ovens, Bakers'	I. W. Knapp	34,432
Ovens, Bakers'	W. Johnson and H. Davies	34,502
Ovens, Portable	E. Wassenich	34,540
Ovens, Portable	G. W. Ayres	34,726
Ovens, Re-burning bone black	W. Moller	36,230
Oysters, Apparatus for steaming	H. Evans, jr.	35,511
Oysters in the shell, Steaming	I. Solomon	37,182
P.		
Packing apples, Machine for	H. B. Gill	35,199
Packing for pistons	D. R. Fraser	34,749
Packing, Piston	T. Carpenter	34,878
Packing, Piston	O. C. Smith	35,267
Packing, Piston	P. L. Kreuter	35,378
Packing, Piston	D. R. Fraser	35,439
Packing, Piston	C. A. Murray	36,016
Packing for piston and valve rods	R. Martin	35,698
Packing to projectiles, Application to soft metals	W. Boekel	36,449
Packing for rotary pumps	O. Sweet and M. E. Hicks	37,015
Packing for steam-engines	J. L. Bates	36,987
Packing for steam and other engines	W. Peters	34,283
Packing machine, Flour	A. Brown	35,075
Paddles, Pendulum	A. F. W. Neynaber	36,165
Padlocks	J. W. Lyon	35,030
Paints, Preparation of white oxide of zinc for use in.	G. T. Lewis	36,414
Paints and varnishes, Treating petroleum and other oils to produce a vehicle for.	A. Meucci	36,419
Palm-leaf fabric, Manufacture of	F. Perrin	37,138
Pans for evaporating, Vacuum	J. A. Southmayd	34,651
Pans for evaporating saccharine juices	J. M. Moss	35,350
Pans for saccharine juices, Evaporating	W. E. Prall	34,469
Pans for saccharine juices, Evaporating	E. D. Foss	34,484
Pans for saccharine juices, Evaporating	D. B. Neal	34,644
Pans for saccharine juices, Evaporating	P. W. Gates	36,881
Pans for saccharine and other juices, Evaporating	T. J. Price	34,264
Pans for saccharine liquids, Evaporating	O. N. Brainerd	34,236
Pans for saccharine liquids, Evaporating	G. Stump	38,844
Panelling machines	H. P. Westcott	34,083
Panels to wooden frames, Constructing and attaching iron.	J. Shaefer	36,427
Panoramic advertising, Apparatus for	J. Berthoud	36,937
Pantaloons	J. D. Ehlees and J. P. Herron	34,635
Pantaloons, Attaching straps to	S. Heller	35,608
Pantographic engraving machines	B. L. Phillips	37,177

Invention or Discovery.	Name of Patentee.	No.
Pantographic reversing instrument	C. L. Gets	36,212
Paper, Composition for treating vegetable	C. S. Dikeman	36,704
Paper, Drying sized	N. W. Taylor and J. W. Brightman	35,117
Paper, Folding	L. E. Osborn	35,249
Paper, Folding and stitching	J. H. Tanner	36,498
Paper, Machinery for making	J. Harper	34,633
Paper, Printing and cutting	J. F. Tapley	34,601
Paper, Safety	H. Hayward	34,634
Paper, Trimming wall	D. Flower	35,750
Paper and other purposes, Application of the hibiscus mascheutos to the manufacture of.	W. J. Cantelo	35,215
Paper-cutting machine	A Dougherty	35,592
Paper file	W. L. Woods	36,200
Paper-folding machine	J. North	35,738
Paper pulp, Cleaning	S. S. Crocker	34,945
Paper pulp, Separating the fibres of wood and other substances for the manufacture of.	A. S. Lyman	34,581
Paper pulp, Washers for	J. Piercy	34,214
Parasols and umbrellas, Joints for ribs of	R. A. Stratton	36,960
Parasols and umbrellas, Tips for	R. A. Stratton	36,961
Pavements, Composition for concrete	H. Burlew	36,338
Pavements, roofing, and other purposes, Composition for.	J. Clark and D. French	34,404
Peat, Preparing	W. H. Buckland	34,391
Pegging boots and shoes	J. F. Sargent	34,335
Pegging boots and shoes	M. Marshall	34,370
Pegging boots and shoes, Machine for	A. C. Gallahue	36,892
Pegging machines	J. Taggart	34,170
Pegging machine	W. Fitzgerald	35,749
Pegging machine, Hand	E. T. Ingolls	36,157
Pencils	J. Reckendorfer	36,854
Pencils, Attaching India-rubber to	W. C. Vosburgh and W. A. Ludden.	35,355
Pencil sleeve and eraser, Combination of	F. E. Oliver	35,467
Pens, Metallic	R. Griswold	35,312
Pens, &c., Boxes, cases, and cards for	J. Mason	35,201
Penholders	G. G. Ray	34,983
Penholder	G. H. Christain	36,507
Penholders	W. H. Towers	36,972
Pen-rack	O. P. Smith	35,786
Pessaries	B. F. Taft	36,040
Petroleum for the manufacture of illuminating gas, Preparing.	T. Clough	36,453
Petroleum and other oils, Apparatus for distilling.	A. Quinn	36,481
Petroleum and other oils to produce a vehicle for paints and varnish, Treating.	A. Meucci	36,419
Petroleum. (See also *Oil, Coal.*)		
Photographic albums	E. D. Griggs	35,310
Photographic apparatus	N. F. English	35,308
Photographic pictures, &c., Rolling	C. Sellers	36,028
Photographic plate-holder	H. K. Averhill, jr	35,206
Photographic plate-holder	A. B. Wilson	37,252
Photographs, Apparatus for producing vignette	E. R. Scott	35,857
Photographs, Press for	R. Sibley	35,570
Photographs, &c., Roller press for	E. B. McCoy	34,515
Photography to printing, Application of	A. L. Poitevin	36,821
Physicians' prescription cases	N. S. Hamlin	36,710
Piano	A. H. Hastings	34,491
Pianos, Iron frames of	H. Worcester	35,484
Pianos with melodeon attachment	L. Louis	35,528
Piano-fortes	T. Marschall	34,114
Piano-fortes	M. Strange	34,290
Piano-fortes	S. T. Parmelee	35,703
Piano-fortes	S. T. Parmelee	35,704
Piano-fortes	F. C. Light	35,766

Invention or Discovery.	Name of Patentee.	No.
Piano-forte, Combination of reed instrument with the.	R. W. Carpenter	37,217
Piano-forte actions	H. Steinway, jr	34,910
Piano-forte actions	G. H. Hulskamp	36,712
Piano orchestra	J. B. Schalkenbach	35,490
Piano strings and other purposes, Electro-plating steel wire for.	M. Miller, jr	34,640
Picks, Millstone	A. S. Jones	34,966
Picks, Millstone, Handles for	A. Rowe	36,170
Pictures, Screw support for hanging	M. Judd	34,837
Pictures, cards, &c., Metallic cases for	H. J. and T. Hall and H. Hall, jr.	34,489
Piers for bridges, &c., Building	J. Du Bois	36,512
Piers and bridges	W. H. Wood	36,747
Piers, light-houses, &c., Foundations for	L. Bail	34,474
Pins	W. H. Towers	36,313
Pins, Dentists'	F. W. Smith	34,616
Pins, Shawl	H. M. Hall	36,003
Pins, Shawl	L. F. Hall	36,838
Pipes, Flask for cast iron	J. Forth and J. Ingham	36,037
Pipes, Moulds for cement	H. Knight	34,890
Pipes, Moulds for cement	H. Knight	35,243
Pipes, Steam or hot air	R. T. Crane	36,141
Pipes, Tobacco	R. A. Hove	34,148
Pipes, Tobacco	T. C. Andrews	34,187
Pipes, Tobacco	J. A. Pease	34,231
Pipes, Tobacco	A. D. Milne	34,585
Pipes, Tobacco	O. Ernst	34,745
Pipes, Tobacco	T. Shaw	35,042
Pipes, Tobacco	A. J. Bowen	35,559
Pipes, Tobacco	O. Ernst	35,926
Pipes, Tobacco	H. Kurth	37,044
Pipes, Tobacco, Composition for lining	G. H. Cook	34,106
Pipes, Tobacco-smoking	R. Heneage	36,092
Pipes and cigars, Mouth-pieces for	B. S. Stokes	35,491
Pipe thimbles, Stove	W. H. Davis	34,743
Pistol and sword, Combined	R. J. Colvin	34,740
Pistol and sword, Combined	L. Gabel	35,093
Pistol with a sword, Combining	D. A. Conriter	34,625
Pistons for force pumps	H. H. Cooley	36,702
Pistons for pumps	J. Patterson	36,912
Pistons for steam engines	A. J. Scoville and A. H. de Clercq	34,552
Piston for steam engines	S. M. Seley and P. Hopkins	35,711
Pitcher, Ice	S. Curtis, jr	34,228
Pitchforks, Horse	W. H. Palmer and W. Crumb	34,317
Pitchforks, Horse	S. Raymond	36,915
Planes	J. Vendrand	35,719
Plane stock	G. F. Evans	34,248
Planing machine	C. P. S. Wardwell	34,174
Planing machines, Carriage or movable bed for forming and.	E. Allen	36,884
Planing machines, Metal	W. Sellers	36,113
Planing and matching machine, Combined	W. H. Doane and W. E. London	36,901
Planing, moulding, boring, and sawing machines.	J. H. Post	36,025
Plant and tree protector	J. Weed	36,742
Planters, Corn	W. W. Wilson	34,176
Planters, Corn	W. R. Pomerroy	34,902
Planters, Corn	A. Streeter	35,280
Planters, Corn	H. Ruth	35,545
Planters, Corn	J. A. Fruse	35,814
Planters, Corn	J. C. Moore	35,831
Planters, Corn	J. Armstrong, jr	35,914
Planters, Corn	A G. Parker	36,020
Planters, Corn	T. R. Brent	36,069
Planters, Corn	A. W. Brinkerhoff	36,335
Planters, Corn	H. B. Lansing and H. W. Grenell	36,569

Invention or Discovery.	Name of Patentee.	No.
Planters, Corn	J. B. Greeley	36,753
Planters, Corn, Foot	N. Silvester	35,330
Planters, Corn, Hand	J. M. and W. C. Wallis	36,815
Planter, Corn, and lime-spreader	M. M. Mackerley	34,438
Planters, Seed	J. D. Smith	35,713
Planters, Seed	J. W. McGaffey	35,771
Planting machines	J. L. Sater	35,546
Plants, Separating fibres from	J. D. Brame	37,081
Plastering surfaces	J. J. Althouse	34,099
Plates, Manufacture of corrugated	S. J. Seeley	36,424
Pliers for closing skirt clasps	J. Beck	35,666
Ploughs	M. Grover	34,092
Ploughs	C. Beidler	34,191
Ploughs	J. R. Mason	34,371
Ploughs	R. Johnson	35,098
Ploughs	E. J. White	35,272
Ploughs	W. Coggeshall	35,415
Ploughs	D. F. Humphrey	36,004
Ploughs	L. Wolf	36,122
Ploughs	T. E. C. Brumley and J. G. Dodge	36,136
Ploughs	J. Robinson	36,532
Ploughs	D. Harper	36,711
Ploughs	W. Jones	36,999
Ploughs, Corn	W. B. Broadwell	35,434
Ploughs, Cultivator	J. Meyer	36,909
Ploughs, Cutter attachment to	J. Long	34,893
Ploughs, Iron and steel	W. Morrison	34,962
Ploughs, Mole	R. P. Smith and J. R. Gates	34,074
Ploughs for railroads, Snow	P. Boyden	35,074
Plough, Reversible	C. F. Barager	35,432
Ploughs, Rotary	C. Comstock	35,218
Ploughs, Snow	J. Sheriden	35,066
Ploughs, Subsoil	S. T. W. Potter	35,890
Plough and gun, Combined	C. M. French and W. H. Fancher	35,600
Plough beam	E. T. Ford	35,147
Plough beams	E. Bement	36,446
Plough points	E. Bement	36,447
Ploughshares	J. S. Hall	35,819
Ploughshares, Forging, bending, and shaping	J. S. Hall	36,691
Ploughing, excavating, and grading machine	E. H. and D. R. W. Williams	35,005
Pockets, Safety	S. French	35,731
Polishing boots and shoes, Apparatus for cleaning and.	S. Horsley and E. H. Jones	36,408
Pontoon, Iron	H. Grundt	34,389
Postmark and stamps, cancelling	M. P. Norton	37,175
Post offices, Hand-stamps for	M. P. Norton	34,184
Pot, Culinary	J. D. Flansburgh	34,202
Pots, Tea and coffee	E. B. Manning	35,457
Potash from nitrate of soda, Manufacture of nitrate of.	J. C. Pennington	35,946
Potatoes, Articles of food made from sweet	S. R. and S. Andres and McDonough Bucklin.	34,389
Potatoes, Digging	J. Pettengill	36,689
Potatoes, Planting	L. A. Aspinwall	36,634
Potato-diggers	J. Munson and J. R. Lyon	34,519
Potato-diggers	J. Slocum	34,787
Potato-diggers	W. H. Ryan	35,396
Potato-diggers	S. B. Conover	35,435
Potato-diggers	J. W. Woolsey	36,434
Potato-diggers	T. Lane	37,100
Potato-digger and cultivator	C. P. Goss	35,371
Powder, Blasting	W. R. Thomas and M. Emanuel, jr.	34,654
Powder, Blasting	H. Biebuyck	36,599
Powder, Blasting, Composition for	W. R. Thomas and M. Emanuel, jr.	37,117
Powder, Percussion	F. M. Ruschhaupt and J. Schulte	35,477

Invention or Discovery.	Name of Patentee.	No.
Powder under water, Composition of fuze or slow match for igniting.	T. K. Anderson	34,233
Power, Motive	J. Bruce	36,506
Presses	R. V. De Gunon and G. W. Barclay.	34,996
Press, Baling	I. S. Schuyler	35,203
Presses, Baling	J. K. Harris	36,297
Presses, Cheese	C. A. Codding	34,241
Press, Cheese	B. F. Harrman	35,820
Presses for compressing and baling	D. S. Gardner and N. A. Manning.	34,750
Presses, Drop	W. F. Goulding and F. Cheney	36,459
Press, Foot	W. M. Warren	36,491
Press, Hay	S. Colahan	34,622
Press, Hay	I. and A. Bisbee	34,872
Press, Hay	W. B. and H. M. Peavey	35,889
Press, &c., Hay and cotton	G. A. Hotchkiss	35,913
Press, Hay and hemp	G. W. Penniston	36,525
Presses, Hydraulic, Retainer for	M. Maddon	35,881
Presses, Oil	W. V. McKenzie	35,168
Press for photographs	R. Sibley	35,570
Press for photographs, &c., Roller	E. B. McCoy	34,515
Presses, Printing	G. P. Gordon	34,111
Press, Printing	J. Gordon	36,839
Presses, Printing	G. P. Gordon	36,840
Press, Printing, Engraved plate	T. C. Andrews and J. Shinn	36,759
Press, Printing, Hand	J. Schaffer and E. Spencer	34,166
Press, Printing, Self-feeding card	N. Ames	35,055
Presses for stamping tickets, &c	G. Bailey	36,763
Presses, Tobacco	J. Briggs	36,751
Presses, Tobacco, Retainers for	A. P. Cochran	36,276
Press, Wheel	C. Sellers	35,127
Primer, Percussion cap	C. R. Alsop	34,919
Printers' inking rollers, Composition for making	L. Francis and F. W. Letmate	35,149
Printers' lapping	S. W. Baker	35,133
Printing, Application of photography to	A. L. Portevin	36,821
Printing and dying with aniline colors	N. Lloyd and J. G. Dale	34,840
Printing surfaces, Process of obtaining	P. Schulze	37,078
Projectiles	R. Weir	35,795
Projectiles, Application of soft metal packing to	W. Bockel	36,449
Projectiles, Composition for covering	J. Absterdam	36,132
Projectiles, Composition for filling shrapnell and other similar.	A. Berney	35,659
Projectiles, Compound explosive	M. H. Callender	36,696
Projectiles, Explosive	B. B. Hotchkiss	35,153
Projectiles, Explosive	C. W. Isbell	35,277
Projectiles for fire-arms	D. M. Mefford	34,285
Projectiles for fire-arms, Casting	B. A. Mason	34,153
Projectiles, Giving rotation to ordnance	H. K. Kenyon	36,959
Projectiles, India-rubber wad for	J. N. Bird	36,879
Projectiles, Liquid-fire shell, or	A. Berney	36,934
Projectiles, Mode of discharging	A. R. Cooley	35,587
Projectiles for ordnance	W. and H. H. Mansfield and J. Morse.	35,103
Projectiles for ordnance, Explosive	W. E. Browne	35,503
Projectiles for ordnance, Explosive	W. W. Hanes	36,295
Projectiles for ordnance, Explosive	W. F. Rippon	36,858
Projectiles for ordnance, Hot	C. F. James	34,207
Projectiles for rifled ordnance	B. S. Alexander	34,091
Projectiles for rifled ordnance	W. H. Havens	34,493
Projectiles for rifled ordnance	C. W. Small	34,596
Projectiles for rifled ordnance	J. L. Henry	35,824
Projectiles for rifled ordnance	W. W. Hubbell	35,825
Projectiles for rifled ordnance	B. F. Sturtevant	36,116
Projectiles for rifled ordnance	A. H. Emery	36,773
Projectiles for rifled ordnance	W. H. Smith	37,260
Projectiles, Sabot for feathered	J. P. Woodbury and S. T. Gray	35,965
Projectiles for smooth-bored ordnance, Rotating	T. F. Rielly	34,693

Invention or Discovery.	Name of Patentee.	No.
Projectiles from smooth-bored ordnance, Rotating.	T. Goodrem and C. Jackson	36,001
Projectile or shell, Liquid-fire	A. Berney	36,934
Propeller	C. O. Hare	35,035
Propellers	T. W. Roys	35,475
Propellers, Adjustable and reversible	A. R. Cooley	35,219
Propeller, Canal-boat	O. Plumb	36,526
Propellers, Cantering	P. W. McKenzie	36,161
Propellers for land conveyance	P. Dickson	36,995
Propellers, Marine	W. H. Johnson	35,451
Propeller, Marine	W. H. Willard	36,492
Propellers relatively to the draught of water, Apparatus for adjusting.	W. H. Willard	35,573
Propeller, Rocking sled	J. Wiarda	37,191
Propeller for shallow water, Wave	J. B. Eads	37,157
Protector, Tree and plant	J. Weed	36,742
Pulley, Friction	C. Burleigh	35,853
Pulverizer and seed-sower	G. W. Bonham	34,049
Pumps	J. A. Morrell	34,068
Pumps	W. S. Bartle	34,101
Pumps	G. Collins and E. Piper	34,105
Pumps	W. S. Kelley	34,505
Pumps	G. W. Cook and Z. E. B. Nash	34,624
Pumps	H. M. Wyeth	34,711
Pumps	G. H. Dodge	34,819
Pumps	J. W. Douglas	35,059
Pumps	J. Budd	35,077
Pumps	L. Button and R. Blake	35,079
Pumps	H. H. Palmer	35,108
Pumps	L. P. Dodge	35,222
Pumps	A. M. Putnam	35,258
Pumps	A. Munson	35,465
Pumps	A. Cooley	35,508
Pumps	E. A. Jeffary and J. D. Quackenbush.	35,522
Pumps	R. Henry	35,609
Pumps	J. Greaves	35,677
Pumps	B. Douglas	35,802
Pumps	J. L. McPherson	35,829
Pumps	G. Palmer	35,868
Pumps	J. E. Thorp	36,042
Pumps	E. Rhoades	36,622
Pumps	J. R. Miller	36,665
Pumps	J. Greaves	36,708
Pumps	W. Mullally	36,825
Pumps	H. C. Hunt and G. W. Devin	36,837
Pumps	T. J. McGowan	36,844
Pumps	H. M. Wyeth	37,024
Pumps, Blow-off cocks for	T. Shaw	36,238
Pumps, Cattle	J. F. Black and A. Buracker	36,203
Pumps, Chain	A. G. Bradford	35,499
Pumps, Cream	M. A. Richardson	36,530
Pumps for deep well	J. Old	34,444
Pumps, Instrument for reaming out the barrels of ship	S. H. Sugett	36,628
Pumps for low-pressure steam engines	J. Vial	36,431
Pumps, Metallic moulds for casting	H. Port	34,774
Pumps, Operating railroad	G. M. Cole	37,152
Pumps, Reciprocating	W. D. Andrews	35,577
Pumps, Rotary	F. B. Pierce	35,388
Pumps, Rotary	F. Kettler	35,452
Pumps, Rotary	G. W. Nichols	35,466
Pumps, Rotary	W. H. Guild	35,604
Pumps, Rotary	J. Banks	36,500
Pumps, Rotary	F. B. Scott	37,577
Pumps, Rotary	E. Perry	36,588

Invention or Discovery.	Name of Patentee.	No.
Pumps, Rotary forcing	G. W. Billings	36,888
Pumps, Rotary, Packing for	O. Sweet and M. E. Hicks	37,015
Pumps, Steam	C. and G. M. Woodward	35,966
Pumps, Steam	H. C. Sergeant	36,623
Pumps, Steam	W. Sewell	36,862
Pumps, &c., Fagots for wrought metal cannons, hydraulic.	S. J. Reeves	37,108
Q.		
Quartz crusher	L. W. Williams	37,020
Quicksilver, oil, &c., Casks for holding	A. D. Campbell and E. Perce	34,051
R.		
Rack, Hay and grain	R. Coob	36,604
Rack, Portable and convertible sheep	S. R. Hawkins	36,905
Rack and trough for feeding stock, Combined	A. Ralston	35,259
Radiators	E. and J. Bourne	36,068
Radiators, Steam	J. Mason and R. Briggs	34,643
Rafting logs and timber, Mode of	N. C. Bonk	36,764
Rails, Railroad, Joint fastenings for	B. F. Gossin	36,788
Rails to railroads, Constructing and applying	H. J. Lombairt	35,879
Rails, Railroad, Piles for	J. Price and W. Lewis	36,795
Rails for street railroads	L. F. Whitney	36,432
Rails and chains, Railroad	N. W. Northrup	35,537
Railroads, Snow ploughs for	P. Boyden	35,074
Railroad joints, Mode of securing	L. Fay	35,597
Railroad joints or chains	L. B. Tyng	34,452
Railroad splices	W. R. Arthur	37,067
Railroad station indicators	L. E. Smith	34,274
Railroad tickets, Cases for	J. H. Duffield	34,245
Railroad ticket stamp	E. Spencer	34,378
Railroad tracks, Cleaning snow from	E. M. Luckett	34,257
Railways	B. C. Smith	36,579
Railways, Construction of	H. Carpenter	35,198
Railways, Street	J. Haworth	34,957
Rakes for harvesters	J. H. Mears	34,584
Rakes for harvesters	R. Bryson	34,875
Rakes, Harvesters'	G. L. Squire	34,909
Rakes for harvesters	W. H. Seymour and A. Palmer	34,986
Rakes for harvesters	J. Taylor	35,270
Rakes for harvesters	J. R. Whitmore	35,343
Rakes for harvesters	J. H. Mears	35,653
Rakes for harvesters	J. H. Harnly	37,133
Rakes, Hay	D. Robinson	34,848
Rakes, Horse	J. Miller	34,441
Rakes, Horse	R. H. Blair and A. W. Beatty	34,538
Rakes, Horse	C. Furst, D. Bradley, and J. Lacy	34,953
Rakes, Horse	B. and J. Mellinger, and S. Mellinger, jr.	34,245
Rakes, Horse	J. Q. Adams	35,428
Rakes, Horse	N. T. Brown	35,502
Rakes, Horse	R. M. Treat	35,572
Rakes, Horse	C. B. Cogswell	35,586
Rakes, Horse	C. F. Walker	36,043
Rakes, Horse	E. L. Bergstresser	36,268
Rakes, Horse	J. H. Shireman	36,426
Rakes, Horse	G. H. Daley and R. M. Treat	36,897
Rakes, Horse	J. M. Woodcock	36,928
Rakes, Horse	B. and J. Mellinger and S. Mellinger, jr.	36,961
Rakes, Horse	A. H. Chaplin	36,992
Rakes, Horse	A. B. Sprout	37,012
Ram, &c., Steam marine	R. J. Gatling	36,402
Ranges, Cooking	F. S. Merritt	34,212

Invention or Discovery.	Name of Patentee.	No.
Ranges, Kitchen	T. S. Clogston	34,121
Ratan machinery	C. W. Trow	35,859
Ratan machinery	T. J. Mayall	36,056
Ratan machinery	T. J. Mayall	36,057
Ratan machinery	T. J. Mayall	36,058
Reading card	B. Snyder	36,242
Reamers, taps, &c., Guide attachment for	W. S. Hadley	36,903
Reels, Horse	B. F. Lee and H. A. Alden	36,438
Reflectors	W. H. Crawford	36,205
Reflectors, Lamp	J. T. Williams	35,644
Reflectors to lamps, Applying	G. F. J. Colburn	36,339
Reflectors and chimney protector, Lamps	G. F. J. Colburn	35,507
Refrigerators	J. P. Ellicott	34,122
Refrigerators	A. H. Hasting	34,205
Refrigerators	J. J. Barrett	35,208
Refrigerators	T. M. Davis	36,282
Refrigerators	W. Gregg	36,346
Refrigerators for steam engines	W. A. Lighthall	35,162
Registers for bar-rooms	J. McNamee	35,566
Register, Grain	G. D. Denison	34,052
Registers, Grain	T. N. Wheeler	36,045
Registers, Grain	L. W. Hines, G. Saterlee and S. W. Harden.	36,565
Registers, Hot-air	C. B. Sawyer	34,783
Registers, Hot-air	W. B. Kehew and C. H. Fifield	35,938
Registers, Weighing	W. O. Strong	34,077
Regulators, Car truck	F. Andriesson	34,234
Regulators, Gas	C. T. Judkins	34,507
Regulators, Gas	J. Edson	35,146
Regulators, Gas	J. H. Norton	35,538
Regulators, Gas	A. Smith	36,306
Regulators for horse powers and speed	S. Perry	35,064
Reins, Holding harness	E. C. McKinney	34,720
Rein guard for horses	G. C. Worth	36,930
Retorts, Gas	W. P. Battey and W. N. Tayler	36,065
Retorts, Gas, Casting	A. Pevey	34,980
Retorts, Gas, Setting	A. Weber	36,119
Rice, Cleaning	S. Gardner and A. B. Howe	37,093
Rice-cleaning, hulling, and pearling machine	S. Nowlan	35,387
Rifles, Back sights for	E. Allen	36,760
Rifling machines	T. Powers	37,054
Rifling machines	C. Sharps	37,057
Rig, Topsail	P. Rouse	34,924
Rigging and masts	G. T. May	35,889
Rigging and in the spars of ships and other navigable vessels, Improvement in.	B. Ricketson	36,462
Rings, Spermatorrhœal	J. F. Townsend	36,314
Rings, Spermatorrhœa	Le Roy Sunderland	37,116
Rings, buckles, &c	K. Frazor	35,150
Roasters, Coffee	J. C. Holston	34,923
Rock and stump extractor and elevators	T. and C. C. Newcomb	34,466
Rockets, War	T. W. Roys and G. A. Lilliendahl	35,977
Rods, Coupling and shafting	N. W. Northrup	34,769
Roller for clothes-wringer	J. Critcherson	34,394
Rollers, Composition for making printers' inking.	L. Francis and F. W. Letmate	35,149
Rollers, Field	A. M. Brinkerhoff and A. J. Failor	36,330
Rollers for wringing machines	J. J. Haley	34,142
Rollers for wringing machines	S. R. Wing	35,283
Rollers for wringing machines	S. A. Bailey	35,663
Rolling metal for shoe-tacks	J. F. Sargent	34,334
Rolls, for rolling piles of railroad iron	J. Thomas	35,281
Roof, Metallic and wooden	E. U. Benedict	37,211
Roofing	J. Duke	34,200
Roofing	W. H. White	34,543
Roofing, Cement and tile	Z. Street	34,653

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Roofing, Fabrics for	A. Robinson	36,484
Roofing, Metallic	J. J. Hayden	34,254
Roofing, pavements, and other purposes, Composition for.	J. Clark and D. French	34,404
Roofing, Seaming metal	C. H. and W. G. Dowd	36,561
Roofing, Terra-cotta	S. M. Logan and P. E. Baker	35,164
Roofing, Tile	I. Marsh, jr., and G. Marsh	36,225
Roofing composition for railroad cars, &c	H. Grant	34,251
Rooting, Cutting the noses of swine to prevent them from.	R. Hurd	34,368
Roots, Machine for cutting	H. C. Fletcher	35,928
Rope to fibre, Machinery for reducing	T. A. Dunham	36,080
Rubber, &c., Composition substitute for horn, hard.	R. Hearing	36,406
Rubber compound, Hard	O. Falke	35,599
Rubber, Restoring waste	T. J. Mayall	34,309
Rubber. (See also *Caoutchouc and India-rubber.*)		
Rudder	J. C. Raymond	36,109
Rudders, Shipping spare	M. Wappich	34,797
Rulers, Parallel	J. C. Dow and I. Myrich	35,812
S.		
Sabot for explosive shells	C. T. James	34,965
Sabots for hot shot, Expanding	C. T. James	34,950
Saccharine juices and liquids, Evaporating, (See *Evaporating.*)		
Sacks with flour, Apparatus for filling	J. C. Philbrook	36,023
Sacks and bags, Machine for holding open	J. Robinson	36,423
Saddles	I. Dunham	36,900
Saddles, Harness	J. C. Tobias	35,656
Saddles, Harness	R. Spencer	36,376
Saddles, Harness, hooks, and sterrets for	S. E. Tompkins	36,248
Saddles, Military or other riding	R. Spencer	34,320
Saddles, Riding	L. Friese	36,400
Sadiron	J. Webster	37,118
Sadiron heaters	J. S. Brooks	34,237
Sadiron heaters	G. Chilson	35,139
Sadiron heaters	J. S. Brooks	36,990
Sail, Fan-shaped	W. H. Mallory	36,099
Sail, Gaff	G. T. May	35,944
Sails for ships and other navigable vessels	R. Ricketson	36,483
Sail link to mast hoops	J. S. Seavey	35,654
Salt, Manufacture of	N. W. Clark	34,348
Salt, Manufacture of	N. Chapin	34,669
Salt, Manufacture of	C. O. Garrison	36,211
Salt, Purifying common	J. W. Barker and J. P. Hackin	34,179
Sash, Window	J. C. Currier	35,302
Sash, Window	F. G. Ford	35,513
Sash, Window, and setting glass therein	S. Coon	34,244
Sash adjuster, Window	G. Jones	34,967
Sash fasteners	H. S. Phillips	35,489
Sash fasteners	G. Jones	35,523
Sash fasteners	G. Nettleton	35,803
Sash fasteners	C. Sholl	36,031
Sash fasteners	J. A. Minor	36,524
Sash fastenings	P. L. Clow	37,069
Sash supporter and fastener	C. W. Krebs	34,304
Sausage filler	J. G. Perry	36,232
Sausage filler	J. G. Perry	36,233
Saws, Filing	G. F. Hawley	35,935
Saws, Machines for gumming	N. F. Stone	37,014
Saws, Scroll	W. A. Sweet	34,078
Saws, Scroll	W. A. Sweet	34,078
Saws, Scroll	A. Girandat	35,817

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Saws, Scroll, Guide and support for	J. Richard	35,390
Saws, Setting and upsetting	A. A. Hibberd	36,462
Saw frames, Wood	J. Dillingham	34,946
Saw gear	J. R. Williamson and S. Forsythe	36,748
Saw stocks, Scroll	J. Richards	35,391
Sawing machines	T. M. Bush	34,814
Sawing machines	W. H. Doane	34,883
Sawing machines	B. F. Southgate	35,550
Sawing machines	J. Thompson and D. D. Dalrymple	36,246
Sawing machines	J. R. Williamson and S. Forsythe	36,746
Sawing machine adapted for the use of auger and chisel.	B. Zurn	36,435
Sawing machines, Gig	F. Wilcox	35,725
Sawing machines, Hand	J. A. Talpey	35,790
Sawing machines, Portable	C. S. Brown	35,058
Sawing machines, Scroll	H. D. Stover and E. S. Wright	35,492
Sawing machines, Self-feeding	T. J. Wells	37,188
Sawing machines, Wood	L. Watson	36,544
Sawing wood, Machine for	J. Weldy	34,541
Sawing, boring, moulding, and planing machines.	J. H. Post	36,025
Scales, Platform	T. Fairbanks	34,417
Scales, Platform	T. Fairbanks	34,676
Scales, Platform	F. M. Strong and T. Ross	36,678
Scales, Platform	L. M. Severance	36,918
Scales, Platform	E. Sampson	37,259
Scales, Platform, Portable	J. Howe, jr., F. M. Strong, and T. Pross.	35,348
Scale beams	S. G. Barker	36,828
Scarf, Reversible neck	A. S. Saroni	37,247
Scissors, Stationary counter	A. Steward	35,116
Scissors and knife sharpeners	I. S. and J. W. Hyatt, jr	35,652
Scrapers, Dirt	F. Garber and S. Shiner	35,982
Scrapers, Earth	N. Peck	37,176
Scrapers, Road	J. F. Brooks	34,194
Screens, Grain	W. Rowan and J. M. H. Gill	36,733
Screens, Metal	J. Hopkins	36,957
Screens, Sand	W. Osmond	36,104
Screens for separating oats from wheat	A. C. Ferren	36,052
Screws, Caps for coffin	A. B. Bailey	36,635
Screws, Cork	C. Chinnock	35,362
Screws, Cork	W. Fradgley	35,514
Screws, Wood, Shaving and nicking the heads of.	J. M. Whiting	35,906
Screws, Wood, Threading	J. M. Whiting	35,406
Screws, Wood, Threading	B. A. Mason	35,423
Screws, Wood, Threading	E. Savage	36,196
Screws, Tools for making	J. W. Clark	34,240
Screw-driver	J. Thompson	35,337
Screw support for hanging pictures	M. Judd	34,837
Scuttles, Coal	J. M. Coombs	35,436
Scythe snaths	P. Frost	34,903
Scythe snaths, Nibs for	A. J. White	35,798
Sea and land, Ascertaining position and direction on.	B. Garvey	34,298
Seats of buggies, Boring	G. W. Lemley	35,099
Seats, Head-rest for car	G. Sanford	35,112
Seats for wagons and sleighs	J. T. Minard	34,261
Seed covers for grain drills	J. S. Gage	36,291
Seed-dropping device, Hand	S. Fritz	36,646
Seed sower and pulverizer	G. W. Bonham	34,049
Seeding machines	A. M. Peniston	34,163
Seeding machines	J. R. Finch and T. W. Henderson	34,747
Seeding machines	M. T. Glimsdal	34,830
Seeding machines	J. S. Gage and P. D. Beckwith	34,955
Seeding machines	S. Keeler and J. Barthel	35,317

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Seeding machines	B. F. Field	35,438
Seeding machines	P. Seymour	35,633
Seeding machines	J. W. Kelley	35,764
Seeding machines	G. W. Van Brunt	35,960
Seeding machines	C. Churchill	36,072
Seeding machines	W. M. Jones and S. E. Tyler	36,159
Seeding machines	A. Ingalls	36,521
Seeding machines	J. Shannon	36,535
Seeding machines	J. S. Rowell and M. F. Lowth	36,672
Seeding machines	M. Todd	37,184
Seeding machines, Broadcast	W. Workman	36,329
Seeding machines and cultivators, Combined	A. P. Durant	35,306
Seine nets, Machines for making	B. Arnold	36,499
Separators and smut machines	J. H. Jones	36,784
Separators and smut machines	C. McGinnis	36,788
Settees, Combination of fuel box and washing apparatus with.	M. Bishop	35,210
Settees for railroad passenger cars	J. B. Easlam	36,343
Sewing, Guides for creasing tucks and plaits preparatory to.	W. L. Fish	34,357
Sewing the soles of boots and shoes	G. McKay	35,165
Sewing machines	R. Welch	34,081
Sewing machines	E. M. Hendrickson	34,330
Sewing machines	A. Destony	34,413
Sewing machines	A. C. and F. D. D. Gaud and L. Hanzo.	34,748
Sewing machines	C. Stebbins	34,789
Sewing machines	I. M. Singer	34,906
Sewing machines	E. Townsend	34,915
Sewing machines	R. Thompson	34,926
Sewing machines	C. W. Williams	34,932
Sewing machines	J. C. Smith	34,988
Sewing machines	J. B. Winchell	35,191
Sewing machines	A. Palmer	35,252
Sewing machines	W. S. Hall	36,084
Sewing machines	G. McKay and R. H. Mathies	36,163
Sewing machines	J. S. McCurdy	36,256
Sewing machines	W. O. Grover	36,405
Sewing machines	J. N. Wilkins	36,591
Sewing machines	D. W. G. Humphrey	36,617
Sewing machines	M. Finkle	36,899
Sewing machines	J. A. and H. A. House	36,932
Sewing machines	A. B. Shaw	37,202
Sewing machines, Braiding guide for	S. J. Maddock	36,847
Sewing machines, Fan attachment to	W. T. Spence	36,537
Sewing machines, Felling guide for	W. F. Ensign	35,972
Sewing machines, Folding and tucking gauges for.	S. E. Blake	35,667
Sewing machines, Needle gauge and adjustor for.	J. W. Bartlett	34,807
Sewing machines, Setting and threading needles in.	H. D. Conrad	34,407
Sewing machines, Tension regulator for	P. Pryebil	35,542
Sewing machines, Thread tension of	E. L. Pratt	35,126
Sewing machines and other machinery, Cranks for driving.	T. Williams	36,263
Sewing machine needles	W. O. Grover	34,571
Sewing work cases, Portable	T. H. Burgess	34,813
Shackles or handcuffs	W. V. Adams	35,576
Shackles for railroad cars	H. A. Barnes	35,207
Shafts, Fastening India-rubber rolls to metallic	G. J. Colby	34,818
Shafts, braces, columns, &c., Construction of.	S. J. Reeves	35,582
Shafting, Connecting and disconnecting	W. Mason	34,512
Shafting, coupling, and rods	N. W. Northrup	34,769
Shears, Sheep	W. H. White	35,188
Shells, defending redoubts by	O. Hopkins	34,206

Invention or Discovery.	Name of Patentee.	No.
Shells, Exploding device of	J. J. Dresbach	35,593
Shells, Explosive, Compound	J. McIntyre	36,664
Shells, Explosive, Concussion fuse for	B. B. Hotchkiss	35,611
Shells, Explosive, Igniting	W. Kingsley	36,468
Shells, Explosive sabot for	C. T. James	34,965
Shells for ordnance	G. C. Jones	34,302
Shells for ordnance	C. Peters	34,979
Shells for ordnance, Explosive	W. B. Hubbell	34,059
Shells for ordnance, Explosive	J. M. Hathaway	34,685
Shells for ordnance, Explosive	M. S. Wickersham	34,798
Shells for ordnance, Explosive	C. T. James	35,521
Shells, Plungers of concussion	C. W. Smith and T. D. Stetson	34,788
Shells for rifled ordnance	J. M. Connel and J. S. Hall	34,242
Shells for rifled ordnance	J. P. Rollins	34,268
Shells for rifled ordnance	H. N. Houghton and C. H. Denison.	35,520
Shells or projectiles, Liquid fire	A. Berney	36,934
Sheep and other animals, Grazing	S. C. Davis	34,882
Shield for iron-clad vessels	R. Montgomery	35,495
Shield for riflemen, Portable	T. Hunter	36,781
Shields for surface condensers	F. B. Stevens	36,808
Shingles and other lumber, Sawing	F. Muzzy	35,832
Shingle machines	L. S. Fairchild	34,396
Shingle machines	N. Shaw, W. B. Estabrook, and C. A. Piper.	34,701
Shingle machines	E. Smith	35,266
Shingle machine	S. E. Anthony	35,288
Shingle machines	S. Head	35,974
Ships, Metals for sheathing	J. Le Ferre	34,435
Ships, Reefing topsails and courses of	E. D. Sawyer and J. B. Nichols	37,011
Ships and other navigable vessels, Improvement in rigging, and in the spars of.	B. Ricketson	36,482
Ships and other navigable vessels, Metallic framing for.	B. J. La Mothe	37,236
Ships or other wooden substances under water, Chopping to pieces.	L. G. Merrill	34,211
Ships' armor plates	H. H. Warden	34,539
Ship building	J. W. Griffiths	34,360
Shipping spare rudders	M. Wappich	34,797
Shirt studs, Mode of fastening	W. Vogt	35,641
Shoes, &c., Punching and eyeleting	J. Keith	37,170
Shoes and boots. (See also *Boots and Shoes.*)		
Shoe or calk, Ice	D. Bennet	34,809
Shoe pegs, Preparation of	B. F. Sturtevant	35,902
Shoe tacks, Rolling metal for	J. F. Sargent	34,334
Shoeing stock, Animal	J. Sinclair	36,920
Shot, Canister, Explosive	S. Groom	36,820
Shot, Chain	J. Gault	35,734
Shot, Expanding sabots for hot	C. T. James	34,950
Shot for ordnance, Canister	B. B. Hotchkiss	34,058
Shot for ordnance, Canister or case	E. Townsend	34,602
Shot for ordnance, Chain	A. B. Ely	34,626
Shot for ordnance, Chain	J. Gault	34,628
Shot-hole stopper	E. Lockwood	34,509
Shoulder brace and suspender, Combined	D. W. Canfield	37,149
Shoulder straps	G. Robinson	37,056
Shoulder straps for officers	G. G. Evans	37,143
Shovel, Scoop	T. Blanchard	34,193
Shutters for the port-holes of vessels, &c.	H. D. Stover and W.W.W.Wood.	35,129
Shutter fastenings	S. Ehrman	35,368
Shutter and blind fastenings	F. Chase	34,739
Shutter and blind fastenings	W. B. Barnard	36,597
Shutter and blind supporters	T. C. Ball	35,347
Shuttles	J. F. Scholfield	34,271
Shuttles, Weavers'	C. L. Frink	35,602
Sieves for gas purifiers, Wooden	W. Comb	36,752
Sieves for gas purifiers, Wooden	R. G. Hunt	37,074

Invention or Discovery.	Name of Patentee.	No.
Sieves, Grain	G. Brooks and W. Ogden	35,360
Sifters, Ash	J. Spear	34,990
Sifters, Ash	W. McConnell	37,174
Sifters, Coal	J. Holmes	34,499
Sifters, Coal	F. N. Frost	34,988
Sifters, Coal	S. Grover and S. Putnam	35,516
Sifters, Coal	G. Pratt	35,624
Sifters, Coal	W. B. Wadman	35,642
Sifters, Coal	C. G. Austin	36,202
Sifters, Coal	W. Lines	36,659
Sifting machines	G. L. and S. Harris	36,296
Signals, Firing night	I. Edge and C. C. Hyde	35,089
Signal mechanism for locomotive engines	J. M. Cook	35,032
Silver from waste solution, Apparatus for saving	J. Shaw	35,812
Silver and gold, Amalgamating	J. Hoeniger	35,876
Silver and gold, Amalgamatory machine for	T. Varney	35,904
Silver and gold amalgam, Straining	T. Varney	34,708
Sink and table, Combination of	J. G. Cani	35,136
Skates	W. L. Gregory	34,611
Skates	W. H. Dutton	34,949
Skates	H. Clark	35,012
Skates	P. Bauer	35,358
Skates	W. H. Wellsteed	35,722
Skates	E. T. Starr	36,244
Skates	O. G. Brady	36,503
Skates	G. W. Ansley	36,595
Skates	S. C. Crane	36,819
Skates	J. H. McGuire	36,910
Skates	T. Hope	37,072
Skates	D. Maydole	37,104
Skates	B. Irving	37,169
Skates, Ankle support for	M. C. Haight	36,149
Skates, Fastenings for	J. L. Plimpton	34,593
Skate fastening	D. Maydole	34,896
Skate fastenings	D. Maydole	36,470
Skins, Depilating and bating	J. Brainerd	35,293
Skirt	T. S. Lambert	35,028
Skirts, Applying clasps to	J. H. Baird	37,124
Skirts, Hoop	H. B. Ames	34,225
Skirts, Hoop	C. F. Hendee	34,496
Skirts, Hoop	O. R. Burnham	34,737
Skirts, Hoop	W. D. Sloan	36,677
Skirts, Hoop	H. Loewenberg	37,003
Skirts, Hoop, Attaching clasps to	T. B. De Forest	36,877
Skirts, Hooped	C. S. Hutchinson	36,979
Skirts, Ladies'	A. Douglass and S. S. Sherwood	34,568
Skirts, Skeleton	M. Fishel	34,182
Skirts, Skeleton	M. Opper	35,776
Skirts, Skeleton	W. H. Towers	35,848
Skirts, Skeleton	L. S. Scofield	36,061
Skirts, Skeleton	G. W. Lockwood	36,384
Skirts, Skeleton	J. M. Kenney	37,256
Skirt protectors	L. Humphrey	35,026
Skirt supporters, Corset	L. H. Foy	35,930
Sleds, Boys'	J. N. Brown	34,87[illegible]
Sled and sleigh runners	S. H. Noble	35,10[illegible]
Sleeve fastener	D. Wilcox	35,72[illegible]
Sleighs or cutters, Iron	A. Burchard	34,1[illegible]
Sleigh and sled runners	S. H. Noble	35,106
Sling for carrying overcoats and blankets	J. Short	35,002
Smoothing irons	J. Christy	34,481
Smut machines	R. Mohler	34,691
Smut machines	A. Duncan	36,285
Smut machines	S. B. Williams	36,545
Smut machines and separators	J. H. Jones	36,784
Smut and grain clearing machines	A. E. Teal and W. Ransom	36,311

Invention or Discovery.	Name of Patentee.	No.
Smut and separator machines	C. McGinnis	36,788
Snap-dragon	J. Oesterling	36,364
Snuffers for lamps	R. N. Eagle	36,590
Soap	C. C. Lewis	35,161
Soap, Benzole	R. Grow	35,372
Soap, Manufacture of	I. M. Harshbarger	34,956
Soap, Manufacture of	A. K. Eaton	36,286
Soap, Manufacture of	R. Grow	36,516
Soap, Manufacture of	D. B. Chapman	36,693
Soap, Manufacture of	L. M. T. Riot	36,731
Soap, Silicated	W. H. Holbrooke	34,576
Soda, Manufacture of nitrate of potash from nitrate of.	J. C. Pennington	35,946
Soda-water apparatus	W. Gee	34,826
Sofa convertible into a table, trunk, &c	J. C. Hall	35,517
Sofa and bathing-tubs, Combination of	S. A. Baldwin	35,289
Sofa and vessel berth, Combination of	J. Sutton	36,442
Soil, Treating night	R. B. Fitts	36,399
Soldering irons	A. Wilson	34,799
Soles, Channelling tool for	J. Dillon	36,890
Sorghum juice, Apparatus for evaporating and defecating.	H. McClinton	36,471
Sorghum strippers	J. Goodrich	37,041
Sounding instruments	W. P. Trowbridge	36,182
Sowers, Broadcast	C. M. Clark	36,073
Spading machines, Power	S. G. Reynolds	35,261
Spark arrester	J. Marks and R. Eaton	36,619
Speed in machinery, Device for changing	H. V. Butler and J. C. Hoadley	35,729
Spermatorrheal rings	J. F. Townsend	36,314
Spermatorrhœa rings	La Roy Sunderland	37,116
Spindles, Tightening followers to mill	G. W. Wilson	36,975
Spindles for spinning	J. Eaton	35,145
Spindle bolsters	E. N. Steere	34,221
Spinning, Fliers for	A. W. Smith	36,864
Spinning fliers	J. F. Maynard	36,418
Spinning fliers	S. Blood	36,502
Spinning frames, Bolsters for	S. S. Bartlett	36,986
Spinning machines, Bobbins of throstles for	J. C. Stanley	36,177
Spinning rolls, Covering	D. Read	36,257
Spirits, Treating ardent	J. J. Speed and F. B. Smith	35,900
Spirits, Extension	H. G. Davis	35,303
Splints, Surgical	M. M. Latta	35,614
Spools, Machines to label thread	H. Conant	35,562
Spools for sewing thread	D. Tracy	35,493
Spool-holders, Portable sewing-thread	A. A. Freeman	34,951
Spool-holding, Devices in	J. Loofoendahl	34,397
Spoon, Camp	P. Ulmer	34,338
Spoons, Manufacture of	R. B. Perkins	34,863
Spoons, Sheet-metal	F. Grosjean	34,252
Spoon, fork, and knife, Combined	A. Neill	34,069
Spoon, knife, and fork, Combination of	J. W. Hardie and A. S. Hayward	34,098
Spoon, knife, and fork, Combination of	J. H. Cables	34,712
Spoon, knife, and fork cleaning machine	E. and A. Buckman	34,736
Spouts, Bending metallic	E. Valentine and M. Ridout	37,205
Springs, Air	G M. Alsop	36,498
Springs, Car	R. Vose	34,657
Springs, Car	R. Vose	36,813
Springs, Car bumper and drawhead	C. F. Allen	35,196
Springs, Car, Railroad	A. Bridges	36,050
Springs to car trucks	C. Ohlemacher	36,018
Springs, Carriage	G. W. La Baw and P. F. Campbell	36,220
Springs for carriages, wagons, &c	G. W. La Baw	34,549
Springs, Corrugated spiral car	C. French	34,952
Springs for ladies' dresses	S. J. Sherman	34,531
Springs for lamp chimneys	O. Snow	34,908
Springs, Omnibus	J. H. Dennis	34,136

Invention or Discovery.	Name of Patentee.	No.
Springs, Sash	R. Dirks	34,352
Springs for vehicles	J. Davenport	35,085
Springs, Wagon	J. O. Farrell	34,858
Spur, Spring	A. S. Hardson	35,448
Squares, Trying	T. W. Wisner	36,977
Staging and ladders for artisans	C. Monson	34,313
Staircase and ladder, Folding	C. Monson	34,314
Stalls for horses	J. W. Macintire	34,152
Stamp, Hand	E. Spencer	36,114
Stamp, Postmark and cancelling	M. P. Norton	37,175
Stamp for post offices, Hand	M. P. Norton	34,184
Stamp, Railroad ticket	E. Spencer	34,378
Stamping and branding irons	C. T. Holloway	34,301
Stand, Flower	J. Crawford	37,070
Stand for machines	W. B. Bensent	35,433
Staves, Jointing and dressing	J. Dobbins	36,705
Stave dressing machines	V. W. Houck	35,681
Stave machines	W. H. Doane	35,142
Stave machines	A. Pettingill, jr	35,948
Stave machines, Bed plate of	W. H. Doane	34,353
Steam, Apparatus for evaporating by means of	R. W. Bender	36,267
Steam Engines. (See *Engines, Steam.*)		
Steel, Apparatus for hardening strips of	B. A. Stratton	36,259
Steel, Converting cast-iron into wrought and	J. R. Bradley	34,937
Steel, Process for making	J. C. Stock and J. E. Emerson	34,095
Steel and iron, Manufacture of	A. L. Fleury and C. Adams	35,276
Steel wire for piano strings and other purposes, Electroplating.	M. Miller, jr	34,640
Steelyards	J. Holcomb	34,754
Steering apparatus	A. Beckers	36,445
Steering apparatus	A. Beckers	36,936
Steering and propelling apparatus	H. Kühne	35,693
Stereoscopes	F. Dayton and W. S. Kelly	36,395
Stereotype plates	M. S. Beach	35,986
Stills for coal oils	S. G. Clark	34,816
Stirring and mixing, Apparatus for	G. L. Witsil	36,633
Stirrups, Riding	R. N. Eagle	37,158
Stitch for button-holes	W. Weitling	34,454
Stitching machines	J. W. Briggs	34,938
Stone, Artificial	F. J. Huber	36,153
Stone, Artificial	F. J. Haber	36,154
Stone, Raising and transporting	R. F. Hathaway	35,607
Stone, wood-work, &c., Composition for cleaning painted.	M. Reed	36,368
Stone, &c., Laying under water	W. P. Parrott	34,692
Stool and cane, Convertible	J. Wade	34,096
Stop-cocks, Two-way	R. Leitch	36,222
Stoppers, Bottle	J. A Preston	36,126
Stoppers, Bottle	A. Albertson	36,260
Stoppers for bottles and other vessels, Cutting cork.	J. Power and A. J. Bailey	35,351
Stopper, Shot hole	E. Lockwood	34,509
Stoves	M. Pond	34,120
Stoves	J. Easterly	34,548
Stoves	E. Guyer	34,683
Stoves	J. J. Herrick	34,752
Stoves	G. W. Walker	34,796
Stoves	S. Groom	34,929
Stoves	D. Heilig	34,959
Stoves	O. M. Buttles	35,135
Stoves	J. T. Davy	35,221
Stoves	W. A. Barlow	35,494
Stoves	G. G. Wolfe	35,557
Stoves	J. R. Heyde	35,564
Stoves	S. Groom	35,574
Stoves	S. R. Going	35,658

Invention or Discovery.	Name of Patentee.	No.
Stoves	W. Bickel	36,639
Stoves	W. B. Treadwell	36,974
Stoves	D. G. Littlefield	37,103
Stoves, Army	R. Kingslake	37,043
Stoves, Camp	I. S. Williams	34,385
Stoves, Camp	T. S. Lambert	34,433
Stoves, Camp	S. D. Woodbury	34,457
Stoves, Camp	A. Oot	34,468
Stoves, Camp	F. Chandler	34,546
Stoves, Cook	J. C. Treadwell	34,322
Stoves, Cooking	H. W. Mosher	34,315
Stoves, Cooking	C. J. Woolson	34,658
Stoves, Cooking	W. D. Bartlett	34,871
Stoves, Cooking	T. S. Lambert	34,930
Stoves, Cooking	J. Magee	35,000
Stoves, Cooking	E. J. Cridge	35,141
Stoves, Cooking	C. J. Woolson	35,483
Stoves, Cooking	G. W. Walker	35,905
Stoves, Cooking	G. W. Walker	35,962
Stoves, Cooking	R. E. Deane	36,455
Stoves, Cooking	E. Johnson, jr	36,714
Stoves, Foot	S. Hunt	34,501
Stoves, Gas	S. T. McDougall	35,769
Stoves, Hot-air	N. W. Northrup	34,768
Stoves, Hot-air, Parlor	J. G. Treadwell and W. Hailes	34,323
Stoves, Operating dampers in	O. Paddock	34,446
Stoves, Parlor	G. Chilson	35,506
Stoves, Portable	C. A. Stevens and J. V. Rockwell	34,791
Stove dampers	G. Cessford	34,660
Stove linings	W. Sanford	35,181
Strainer, Wire gauze	D. Sherwood	36,982
Straw and grain separators	S. Huson	36,467
Straw and grain separators	A. B. Davis	37,154
Stumps of trees, timber, &c., Splitting	J. Norton	34,443
Stump extractors	D. C. Smith	34,169
Stump extractors	W. L. Hawkins	34,364
Stump extractors	D. Tanguary	34,794
Stump extractors	C. W. Rawson	35,470
Stump extractor	D. F. and A. P. Luse	35,827
Stump extractors	M. J. Martin	36,227
Stump extractors	I. Hicks	36,585
Stump extractors	F. Godfrey	36,648
Stump extractors	S. W. Ruggles	36,673
Stump and rock extractors and elevator	T. and C. C. Newcomb	34,466
Stump machines	J. Arnold	36,887
Stump pullers	S. H. Richardson	36,671
Sugar, Drip-pots for refining	A. Mackey and J. W. Jarboe	37,046
Sugar, Manufacture and refining of	E. Beanes	36,067
Sugar, Refining and manufacture of	E. Beanes	36,988
Sugar, Revivifying animal charcoal for refining	A. H. Lepley and J. E. J. Cuisinier	35,160
Sugar cane strippers	B. & E. Haworth	35,680
Sugar juices, Evaporating. (See *Evaporating.*)		
Sugar kettles and other vessels, Discharging the contents of.	A. Brear	34,811
Sugar moulds, Carriage for	T. A. Havemeyer and H. Schimitzspan.	34,686
Supporters, Abdominal	Mrs. I. J. H. Howard	35,683
Supporter, Female or truss	A. D. Reeves	34,845
Suspender fastenings	G. A. Meacham	36,100
Suspender and shoulder brace, Combined	D. W. Canfield	37,149
Sweeping machines	R. D. Cary	34,668
Sweeping machines, Street	W. V. Daboll	35,365
Swine, cutting the noses to prevent them from rooting.	R. Hurd	34,368
Swine from rooting, Device for preventing	J. Brown	36,450
Swings	W. J. Huckett	36,216

Invention or Discovery.	Name of Patentee.	No.
Switches, Railroad	P. W. Burnet	34,050
Switches, Railroad	A. Phillips and D. Moore	34,119
Switches, Railroad	W. H. Thompson	34,382
Switches, Railroad	D. H. Shirley	34,532
Sword and pistol, Combined	R. J. Coloni	34,740
Sword and pistol, Combined	L. Gabel	35,093
Sword with a pistol, Combining	D. A. Courter	34,625
Sword handles, India-rubber	M. C. Bogia	35,292
T.		
Table, Extension	C. Monson	34,160
Table, Extension	E. Mets	36,496
Table, Ironing	J. Johnson	35,735
Table and camp chest	H. W. Ball	34,047
Table and chest for bread making	B. Gonzales	36,777
Table and sink, Combination of	J. G. Cain	35,136
Table, trunk, cot, &c., Sofa convertible into	J. C. Hall	35,517
Tablets, Writing	P. Shaw	34,664
Tackle blocks, Bush for the sheaves of	C. H. Platt	35,622
Tacks, Apparatus for leathering	L. G. Bradford	36,640
Tacks, Machines for leathering	S. Loring	34,510
Tacks, Rolling metal for shoe	J. F. Sargent	34,334
Tactics, Teaching military	W. S. Engle	37,160
Tallow, oil, &c., Extracting	A. Randel	34,722
Tan-bark, Apparatus for leaching and obtaining extracts.	W. H. Allen	36,048
Tanks, Oil	J. Reese	34,373
Tanks, Oil	G. W. Howard	34,426
Tanks, steam boilers, vats, &c., Preventing corrosion of.	J. W. Wilcox	34,455
Tanks, Vacuum	J. P. Walter	35,189
Tanning	J. Brainerd	34,609
Tanning	Z. Baker	36,636
Tanning, Apparatus for	J. S. Wheat	34,853
Tanning for morocco and other grain-finished leather.	W. Bush	34,815
Tanning and other purposes, Extracting the strength of bark for.	J. Brainerd and W. H. Burridge	34,873
Tanning composition	M. Benas	34,192
Tanning process	J. J. Johnson	34,688
Tanning vat	J. S. Wheat	35,797
Tap for tapping pipes	H. Kerr	36,907
Taps, reamers, &c., Guide attachment for	W. S. Hadley	36,903
Tape trimmings, Manufacture of	C. O. Crosby and H. Kellogg	36,454
Tapers, matches, &c., Filling, dipping clamps in the manufacture of.	T. Higgins	36,463
Teeth, Artificial	S. S. White	34,228
Teeth, Artificial	D. and J. Pollock	36,234
Teeth, Artificial, Setting	J. Mittlehaus	34,586
Teeth to artificial base, Securing	B. W. Franklin	36,513
Telegraphs, Alphabetical	C. F. Chester	34,480
Telegraphs, Circuit closers for	E. B. and J. S. Lake	35,694
Telegraphs, Electro-magnetic	J. E. Smith	34,989
Telegraphs, Electro-magnetic	J. E. Smith	35,571
Telegraphs, Instruments for	S. F. Day	35,304
Telegraphs, Optical	W. O. Bridge	34,127
Telegraphs, Pneumatic	H. K. Gardner	35,416
Telegraph apparatus	G. B. Hicks	34,574
Telegraphic cables	J. Morgan, A. T. Jay, E. Edwards, and J. Tilston.	34,862
Telegraphic cables, Laying	T. Shaw	35,128
Telegraphing by colors	A. F. Ward	34,079
Telegraphing by light	L. O. Colvin and G. H. Garden	34,623
Telescopes for measuring distances	T. Atteneder	34,608
Tenons on wheel spokes, Cutting	J. M. Simpson	37,060
Tenoning machines	T. B. Jones	34,836

Invention or Discovery.	Name of Patentee.	No.
Tenoning machines	V. Chase	36,138
Tenoning machines, Hand	M. Galvin	34,680
Tenoning machines, Hand	M. Galvin	35,873
Tents	D. Fitzgerald	34,569
Tents	G. O. Townsend	34,603
Tents	B. B. Hawse	34,717
Tents	S. Heiter	35,235
Tents	F. A. Chapelle	35,922
Tents, Attaching bed to	E. Lynch	34,258
Tents, Hammock	T. A. Timmins and A. T. W. Edwards.	34,931
Tents, Hammock	G. W. Morgan, C. H. Tyler, and J. McClave.	35,032
Tents, Heaters and ventilators for	R. Kingsland	37,042
Tents, Ventilating windows for	H. Warner and B. F. Palmer	35,963
Tent, boat, and bridge, Convertible	A. O. Crane	34,672
Tent, cloak, bed, &c., Combined	T. C. Brecht and S. B. Sigesmond	36,685
Theatres, Constructing and arranging footlights for.	G. W. Lloyd	35,696
Thills to axles, Attaching	A. E. Smith	35,785
Thills to axles, Attaching	B. Rico	36,369
Thills to axles, Attaching	L. Derby	36,559
Thills to axles, Coupling	N. Richardson	36,916
Thills to axles, Shackle for connecting	A. A. Peatt	35,170
Thimbles, Stove-pipe	W. W. Davis	34,743
Thread, Dressing sewing	H. Daniels	35,084
Thread tension sewing machines	C. L. Pratt	35,126
Threshers and separators, Grain	W. F. Cochrane	34,131
Threshers and separators, Grain	W. F. Cochrane	34,132
Threshers and separators, Grain	W. F. Cochrane	34,133
Threshing clover and hulling and cleaning the seed.	J. C. Birdsell	35,209
Threshing machines	E. C. Dyer	35,648
Threshing machines	E. D. Burlingame	35,990
Threshing machines	H. Hickman	36,214
Threshing machines, Cylinder for grain securing and.	J. A. Welsh	34,617
Threshing machines, Operating shackles of	I. Cummins	36,443
Thresholds, Water-proof	A. Heavener	36,997
Threstles for spinning cotton	J. Higgins and T. S. Whitworth	34,753
Ticket, Passenger	M. D. Morgan	37,264
Ticket recorders	E. R. Brown	34,939
Tile and brick machines	Z. Street	38,843
Timber, Rafting logs and	N. C. Bonk	36,764
Timber, stumps of trees, &c., Splitting	J. Norton	34,443
Timber, Upsetting	A. C. Twining	36,812
Tined implements from metal plates, Cutting	A. Clark	36,993
Tires, Apparatus for bending	G. Farmer	34,506
Tires for locomotive wheels, Rolling	S. Jaqua	37,206
Tires, Rolling	W. Harris	36,953
Tires, Shrinking	L. B. Monson	34,314
Tires, Upsetting	A. Ingalls	35,097
Tires, Upsetting	G. McKown	35,616
Tires, Upsetting	J. W. Lawson	35,695
Tires, Upsetting	J. M. Brahin	36,504
Tires, Upsetting	G. Danielson	36,509
Tires, Upsetting	J. Robinson	36,533
Tires, Upsetting	F. R. Wilson	37,121
Tires, Upsetting and stretching	C. Seymour	36,372
Tire upsetting machines	M. Mead	34,156
Tobacco, Machine for preparing	H. Walter, sen	36,185
Tobacco, Manufacture of	W. W. Huse	36,520
Tobacco, Preparing chewing	W. W. Huse	36,955
Tobacco cases	H. E. Robbins	35,178
Tobacco holders	J. Y. Leslie	34,308
Tobacco leaves, Process of stripping	W. W. Huse	36,956

Invention or Discovery.	Name of Patentee.	No.
Tobacco pipes	O. Ernst	35,926
Tobacco pouches	R. E. Dixon	35,305
Tombstones	J. H. and G. W. Smith	35,978
Tompion for fire-arms	R. Kingsley	34,430
Tompion for fire-arms	A. Tracy	34,705
Tongs, Blacksmith's	E. Rees	35,260
Tongs, Pipe	W. and F. Kearney	35,762
Tools	O. T. Gilman	34,420
Tools	J. A. Thayer	35,715
Tools for harness makers, Channelling	E. D. Gould	34,421
Tool posts or holders	C. Wright	34,659
Topsails and courses of ships, Reefing	E. A. Sawyer and J. B. Nichols	37,011
Torpedoes under water, Discharging	P. Plant	36,965
Tourniquets	T. S. Lambert	34,112
Tourniquets	J. Dunton	37,156
Traces to whiffle-trees, Fastening for securing	B. D. Reed	36,027
Trace fastenings	W. Koss	35,454
Trace fastening	L. W. Turner and H. H. Mix	35,959
Tracks, City railroad	J. H. Garel	35,909
Traps, Animal	A. Warner	36,543
Traps, Fish	F. Goodwin	24,887
Traps, Mole	L. Andrews	36,827
Traps, Rat	C. R. Moorehouse	34,442
Traps for sinks, &c., Odor	W. E. Hatfield	35,606
Trap, Steam	C. A. Wheelock	35,555
Traps, Steam	A. Lapham	36,522
Trees, Machine for sawing down	L. S. Alder	35,805
Tree protectors	H. B. Record	35,471
Trees and logs, Cutting	W. Ackerman	34,933
Trimmings, Producing folded	C. O. Crosby and H. Kellogg	36,074
Troughs, Connecting sheet metal for eaves	W. M. Phelps	36,855
Trough and rack for feeding stock, Combined	A. Ralston	35,259
Trowels, Plastering	J. Flint	36,757
Trucks, Car	J. Hoopes	35,024
Trucks, Car	E. Frost	35,228
Trucks, Car	A. Bridges	35,410
Trucks, Car	P. Lamb	36,657
Trucks for locomotives	A. F. Smith	34,377
Trucks for railroad cars	E. M. Judd	37,099
Truck, Store	A. Douglas	35,908
Trunks	J. W. Parmenter	36,021
Trunk, table, cot, &c., Sofa convertible into	J. C. Hall	35,517
Trunk stays, Drawing in	J. Holt	34,755
Truss pads	J. A. Schneider	34,167
Truss pads	J. A. Schneider	35,956
Truss or supporter, Female	A. D. Reeves	34,845
Tubes for cooling the breech of ordnance, Arranging water.	J. Hursh	35,877
Tubes, Manufacture of hose and flexible	H. A. Alden	37,192
Tubes, Smoking	A. Woodworth, 3d	35,804
Tubes in tube sheets, Securing	J. H. Knickerboker	35,691
Tubing, Iron, Manufacture of	J. H. Cotton	36,140
Tubing, Wooden	O. W. Stearns	35,186
Tubs, Butter	A. T. Peck	36,361
Turning irregular forms	A. B. Hendyx and F. Farrel	36,093
Turning irregular forms, Machine for	J. Eveland	35,927
Turntables, Railroad	J. H. Dennis	34,135
Turret for war vessels	J. B. Eads	35,088
Type to cylindrical surfaces, Attaching movable	J. H. Foster	35,929
Types, Machine for setting up	O. L. Brown	36,991
Type cases, Bottom for	W. M. Randall and G. C. Howard	36,670
Type-setting machine	D. B. Ray	34,265
U.		
Umbrella	T. H. Ray	37,243
Umbrellas and parasols, Joints for ribs of	R. A. Stratton	36,260
Umbrellas and parasols, Tips for	R. A. Stratton	36,261

Invention or Discovery.	Name of Patentee.	No.
V.		
Valve for air, gas, &c., Regulator	E. Osgood	35,104
Valves, Balance slide	G. Richardson	36,857
Valve, Cut-off	A. K. Rider	35,176
Valves, Cut-off, Operating	W. A. Foster	34,679
Valves, Cut-off, Variable	L. Eikenberry	34,821
Valve, Governor	J. Reichman and H. Kriete	34,523
Valves to heaters for cheese vats	H. A. Roe	35,396
Valves for heating feed-water for steam engines	F. B. Stevens	35,788
Valve for hydraulic engines	G. B. McClinch	34,310
Valves of pressure, Relieving slide	J. Martin	34,259
Valves for pumps, Drain	C. G. Puckett	36,365
Valves for steam apparatus, Air	J. M. Stiven	36,127
Valves for steam engines	D. R. Frazer	34,997
Valves for steam engines	J. H. and A. E. Redstone	35,174
Valves for steam engines	J. and C. B. Hardick	36,407
Valves for steam engines	A. Buchanan	36,556
Valves of steam engines, Operating	L. Eikenberry	34,822
Valves of steam engines, Operating	L. J. Knowles	36,656
Valves for steam engines, Slide	J. V. Merrick	34,517
Valves for steam engines, Slide	J. F. Allen	35,069
Valves for steam engines, Slide	S. H. Hartman	36,299
Valves for steam engines, Slide	J. B. Roach	36,797
Valves for steam engines, Slide	A. Buchanan	36,941
Valves for steam pumps	W. Sewell	36,863
Valves for water-closets	J. E. Boyle	37,213
Valves or wickets for canal-lock gates	G. Heath	35,756
Valve gear of steam engines	J. F. Allen	35,071
Valve gear of steam engines	J. F. Allen	36,695
Valve regulators	F. H. Bartholomew	34,288
Vapor, Generating	D. H. Chamberlain	34,392
Varnish, Coach and furniture	W. A. Turneps	34,232
Varnish, Copal	A. Wheeler	36,874
Varnish, Japan	C. Coale	34,817
Varnish and other paints, Treating petroleum and other oils to produce a vehicle for.	A. Meucci	36,419
Vats, tanks, steam boilers, &c., Preventing corrosion of.	J. W. Wilcox	34,455
Vegetables in hermetically sealed cans, Preserving.	I. Winslow	36,326
Vegetables, Preserving fruit and	E. C. Roberts	35,626
Vegetable substances, Apparatus for preserving animal and.	E. Piper	36,107
Vehicles, Attaching and detaching horses to	A. Colburn	34,671
Vehicles, Axles and reaches for	S. O. and E. J. Post	36,914
Vehicles, &c., Mode of securing cross-bar and shafts to.	L. T. Hazene	36,461
Vehicles, Running-gear of	D. C. Brown	35,745
Vehicles, Velocipede	H. Bogel	35,583
Vehicles, Wheel	D. Gilbert	34,681
Vehicles, Wheeled, Construction of	O. E. Miles	34,518
Vehicles, Wheeled, Hold-back for	J. S. Swan	36,425
Velocipedes	A. Longett	36,160
Veneers, Cutting	L. P. Hawes	34,365
Veneers, Cutting	H. Parker and J. C. Sleeper	35,778
Veneers, Cutting, machines for	W. H. Doane	34,566
Veneer cutting machines	J. Sperry	35,332
Ventilating apparatus	J. McKinnell	36,981
Ventilation	E. Y. Robbins	35,177
Ventilators for buildings	G. W. Muir	36,059
Ventilators, Car	C. Wadsworth	35,190
Ventilator for petroleum oil lamps	S. D. Pinkam	35,039
Ventilators for railroad cars	D. Merril	34,896
Ventilators for railroad cars	W. Westlake	36,063
Vessels, Arming war	J. P. Woodbury	35,193

Invention or Discovery.	Name of Patentee.	No.
Vessels, Attaching armor plates to	J. Rusch	35,353
Vessels, Covering and repairing iron ships and other navigable.	R. F. Loper	34,151
Vessels, Deck-ballast boxes for	T. Fowler	34,358
Vessels, Discharging liquids from kettles and other.	A. Brear	35,007
Vessels, Drawing apparatus for portable	J. L. Treat	34,554
Vessel for extracting essences	O. Ernst	35,747
Vessels, Improvement in rigging and in the spars of ships and other navigable.	B. Ricketson	36,482
Vessels, Iron-clad	R. Montgomery	34,727
Vessels, Iron-clad, Shield for	R. Montgomery	35,495
Vessels, Metallic framing for ships or other navigable.	B. J. La Mothe	37,236
Vessels, Mode of raising sunken	C. Krogh and M. G. Hogness	36,718
Vessels, Navigable	J. W. Griffiths	35,232
Vessels, Preserve	J. Adams	35,286
Vessels, Protecting war	E. A. Stevens	36,868
Vessels, Ships-of-war and other navigable	J. B. Sardy	34,165
Vessels, Submarine armament of	O. C. Smith	35,957
Vessels, Submarine attack on enemy's	J. McClusky	34,116
Vessels for transportation of carbon and other oils.	R. C. Glyde	34,359
Vessels, Turret for war	J. B. Eads	35,068
Vessels-of-war, Constructing and arming	E. A. Stevens	36,869
Vessels, &c., Grappling and raising sunken	S. Rainbird	35,172
Vessels, &c., Shutters for the port-holes of	H. D. Stover and W. W. W. Wood	35,129
Vest	D. Vogl	37,261
Vinegar, Apparatus for making, by the quick process.	A. Werne	34,542
Vinegar, Making	P. Casamajor	34,403
Violins	G. H. Hulskamp	36,713
Violins, Tail-pieces for	J. Pfaff	35,256
W.		
Wagons	J. A. Mowris	35,384
Wagons	G. W. Bass	36,766
Wagons, Pleasure	J. Crandal	34,350
Wagons, Running gear of	J. S. Whitehill	34,278
Wagons, Shifting hinge joint or coupling shafts of.	E. W. Seymour	34,553
Wagons, &c., Punching linchpin-holes and cutting off the journals of axles for.	S. H. Hartman	36,298
Wagon-body, house, bridge, and boat, Combined.	J. C. Adams	34,399
Wagon-ruts on highways, Filling	F. Monroe	34,158
Wagon standards	B. F. Bean	35,743
Walking figures, Automatic apparatus for	E. R. Morrison	35,886
Walls of buildings, Construction of	S. A. Clemens	34,290
Warming apparatus, Feet	J. W. Merrill and J. H. Rowe	35,532
Warming apparatus, Portable	T. R. Timby	36,871
Warps, Dressing and sizing	A. B. Corey	36,833
Washboard	S. J. Babbitt	34,046
Washboard, Circular	T. Fisler	36,145
Washing apparatus with setters, Combination of fuel-box and	M. Bishop	35,210
Washing machine	J. Dennis	34,107
Washing machine	A. Eckerson and J. H. Rensy	34,108
Washing machine	S. and L. A. Davis	34,292
Washing machine	G. L. Witsil	34,340
Washing machine	R. P. Wilson	34,386
Washing machine	J. R. Gill and W. E. Palmer	34,486
Washing machine	J. McDaniel	34,514
Washing machine	L. L. Stearns	34,598
Washing machine	E. B. Boyce	34,667

Invention or Discovery.	Name of Patentee.	No.
Washing machine	C. H. B. Kellogg	34,756
Washing machine	H. P. Briggs	34,812
Washing machine	V. Mott	34,843
Washing machine	R. Knowlton	34,861
Washing machine	T. Bailey	34,870
Washing machine	R. W. George	34,886
Washing machine	A. Jenny	34,889
Washing machine	S. Hull	35,025
Washing machine	J. Phelps	35,037
Washing machine	A. G. Wilkins	35,166
Washing machine	E. Young	35,195
Washing machine	J. Denner	35,220
Washing machine	W. Brown	35,296
Washing machine	G. B. Mallette	35,379
Washing machine	L. N. Muir and A. J. Kline	35,385
Washing machine	D. H. Shearer and C. Haynes	35,398
Washing machine	A. G. Heckrotte	35,518
Washing machine	G. Potts	35,568
Washing machine	N. B. Clabaugh	35,669
Washing machine	C. Howard	35,682
Washing machine	S. T. McDougall	35,770
Washing machine	J. Gill	35,816
Washing machine	J. R. Irwin and E. Guest	35,975
Washing machine	S. T. Adams	36,064
Washing machine	J. Hatcher	36,129
Washing machine	J. L. Schoonmaker	36,173
Washing machine	S. Etter and R. B. Newman	36,210
Washing machine	C. W. Smith	36,307
Washing machine	T. R. Markillie	36,523
Washing machine	G. H. Kidney	36,568
Washing machine	J. R. Whiteside	36,582
Washing machine	W. D. Grimshaw	36,687
Washing machine	A. Edson	36,771
Washing machine	B. Horn	36,978
Washing machine	M. L. Grover	37,226
Washing machine, Clothes	M. Mellinger	36,162
Washing machines, Rollers for	L. Guild	36,494
Washing and wringing machine	J. Hodkinson and O. C. Smith	36,615
Washing and wringing machine	J. S. Lash	36,658
Watches	R. L. Peabody	34,978
Watch-chain guards, or keys	C. E. Green	36,754
Watch escapements	C. O. Guernsey	35,373
Watch escapements	G. P. Reed	35,389
Watch and clock movements	D. J. Mozart	36,103
Watch and locket cases	C. W. Clewly	34,564
Water, Raising and forcing	A. Brear	36,939
Water by steam, Raising	A. Brear	34,810
Water by steam, Raising	W. W. Marsh	36,664
Water-proof thresholds	A. Heavener	36,997
Weather strips	A. S. Fisher	35,224
Weather strips	J. O. Clay	36,931
Weighing apparatus	T. Fairbanks	34,355
Weighing apparatus	W. O. C. Fritzehler	36,290
Weighing grain, Automatic machines for	C. G. Case and J. M. Baker	34,478
Weighing machines, Grain	L. S. Chischester	35,299
Weights, Raising or lifting	J. Heaton	34,958
Wells, Apparatus for cleaning	W. E. Smith	36,375
Whales to the surface of the water, Apparatus for raising sunken.	T. W. Roys	35,476
Wheels to axles, Securing	W. Hamilton	34,490
Wheels, Car, to axles, Attaching	G. M. Palmer	34,070
Wheels, Car, Cast metal	G. G. Lobdell	34,972
Wheel, Car, and axles, Combined	N. W. Northrup	36,790
Wheels, Carriage	C. Leavett	34,149
Wheels, Carriage, Making	C. H. Guard	34,300
Wheel of carriages, Fifth	R. M. Stivers and G. W. V. Smith	36,310

Invention or Discovery.	Name of Patentee.	No.
Wheel, Combined hounds and fifth	G. Archer	35,662
Wheels, Connecting felloes of	J. Eveland	36,774
Wheels, Emery, Cleaning	J. Chandler	34,104
Wheels, Emery, and grinding surfaces, Forming.	G. E. Vandenburgh	34,123
Wheels while loading, Holding wagon	W. T. Pogue	34,551
Wheel, Paddle	L. F. Noe	34,767
Wheel, Paddle	S. Kepner	34,969
Wheels, Paddle, Feathering	W. R. Manley	35,697
Wheels, Paddle, Feathering floats with	J. P. Worthing	35,425
Wheels, Water	G. B. Skinner	34,073
Wheels, Water	W. W. Flemiken	34,139
Wheels, Water	J. Leffel	34,150
Wheels, Water	J. L. Beers and S. Leonard	34,475
Wheels, Water	J. G. Fredenburr and J. L. George	34,485
Wheels, Water	T. H. Russell	34,696
Wheels, Water	J. Haag and J. C. Smith	34,832
Wheels, Water	J. J. Kimball	34,839
Wheels, Water	T. Tripp	35,118
Wheels, Water	B. Harnish	35,233
Wheel, Water	P. Dickson	35,366
Wheels, Water	T. L. Carley and A. Jackson	35,809
Wheels, Water	I. Hayes	35,822
Wheels, Water	C. D. Spears	36,323
Wheels, Water	A. Lind	36,415
Wheels, Water	H. N. Gallagher	36,514
Wheels, Water	T. J. Kindeberger	36,846
Wheels, Water	D. M. Cummings	37,034
Wheels, Water, Casting	T. H. Risdon	37,055
Wheels, Water, Current	W. W. St. John	34,600
Wheels, Water, Current	E. Stewart	36,115
Wheels, Water, Current	W. Aitken	36,265
Wheels, Wind	W. Hopper	35,236
Wheels, Wind	H. Glover	36,610
Wheels, Wind	J. W. Kochler and F. Reichard	36,655
Wheel hubs, &c., Securing boxes to	J. Kritsch	36,412
Wheel spokes, Cutting tenons on	J. M. Simpson	37,060
Wheel vehicles	J. O. Farrell	35,017
Whiffletrees	A. M. Beebe	36,638
Whiffletrees, Attaching and detaching	J. Laughlin	36,786
Whiffletrees to the tow-lines of canal-boats, Attachment of.	A. Clow	35,300
Willow, Peeling	M. Easterbrook and J. M. Wood	34,201
Windlass	J. Stone	36,870
Windlass, Horse-power	L. and P. K. Dedrick	36,142
Windlass, Ships'	J. Emerson	37,194
Windlasses, Ships', Mechanism for operating	B. Merritt and F. M. Gibson	35,772
Windlass, Vertical	P. H. Jackson	34,834
Windlass, Vertical	P. H. Jackson	36,006
Windlass and capstans, Construction of chain	W. H. Harfield	36,087
Windows, Applying netting to	M. M. Livingston	35,767
Windows, Double	T. S. Lambert	34,550
Window stop	J. Slingerland	36,823
Window-washer	J. Farnsworth	35,090
Wind power to produce a reciprocating movement, Application of.	C. C. Moore	36,101
Wings, Manufacture of domestic	J. K. Baer	35,915
Winnowers, Grain	J. Rohmer	34,694
Winnowers, Grain	W. Larrabee	36,301
Winnowers, Grain and seed	G. Westinghouse	34,605
Wipers for blackboards	P. Perry	36,589
Wire with gutta-percha, rubber, &c., Covering	T. Sault	37,112
Wire, Machines for binding	N. C. Perry	35,255
Wire for piano strings and other purposes, Electro-plating steel.	M. Miller, jr	34,640
Wire, &c., Annealing iron and steel	G. I. Washburn	36,628

Invention or Discovery.	Name of Patentee.	No.
Wood, Bending	E. P. Haskell	37,096
Wood, Bending, Machinery for	R. Fitts, jr	36,082
Wood, Machine for sawing	J. Weldy	34,541
Wood, Machine for sawing	J. A. Edick	35,997
Wood, &c., Process for imitating the grain of	G. F. Degelow	36,456
Wood, Process of preserving	H. de Lapparent	35,811
Wood, Splitting kindling	H. Behn	34,808
Wood-bending machine	S. Kingland	35,983
Wood-work, stone, &c., Composition for cleaning painted.	M. Read	36,368
Wool, Cleaning	J. Platt and W. Richardson	36,727
Wool, Drawing and spinning	J. H. Bloodgood	35,211
Wool, Drying	J. Petrie	34,864
Wool, Machinery for oiling	W. Clissold	36,603
Wool, Machinery for spinning	W. T. Abell	35,205
Wool, cotton, &c., Machinery for cleaning	S. R. Parkhurst	35,621
Woollen cloths, Machines for dressing and drying.	D. Henderson	35,823
Wrenches	L. Winslow	35,123
Wrenches	G. B. Phillips	35,740
Wrenches	J. H. Doolittle	35,971
Wrenches, Pipe	H. F. Read	35,950
Wrenches, Pipe	H. V. Faries	36,289
Wrenches, Screw	F. Hollen and A. H. Pierce	34,498
Wringer, Clothes	A. M. Bailey and J. O. Couch	34,178
Wringer, Clothes	J. Johnson	34,281
Wringer, Clothes	C. A. Cummings and F. M. Swallow.	34,395
Wringer, Clothes	C. H. Packard	34,445
Wringer, Clothes	J. R. Gill, W. E. Palmer, and W. W. Webb.	34,610
Wringer, Clothes	N. B. White	34,618
Wringer, Clothes	C. Messenger	34,639
Wringer, Clothes	N. A. Rhoads	34,646
Wringer, Clothes	L. H. Thomas	34,795
Wringer, Clothes	W. Gibb and R. J. Bell	34,827
Wringer, Clothes	D. B. Clement	34,920
Wringer, Clothes	E. M. Stevens	35,115
Wringer, Clothes	D. M. Harris and S. S. Burnett	35,234
Wringer, Clothes	C. E. Bancroft	35,290
Wringer, Clothes	M. Van Anken	35,335
Wringer, Clothes	A. F. Saunders	35,631
Wringer, Clothes	S. Walker	35,643
Wringer, Clothes	J. D. Cochran	35,670
Wringer, Clothes	T. Pool	35,705
Wringer, Clothes	R. P. Wilson	35,726
Wringer, Clothes	J. E. Daniels and G. S. Kendall	35,810
Wringer, Clothes	S. P. Rowell	35,910
Wringer, Clothes	G. P. Towle	35,911
Wringer, Clothes	G. H. Kidney	35,940
Wringer, Clothes	H. W. Putnam	36,480
Wringer, Clothes, Roller for	J. Critcherson	34,394
Wringer, Clothes, and mangle combined	J. D. Tifft	35,716
Wringing machines	J. E. Everett	35,560
Wringing machines	S. Blodgett	36,271
Wringing machines	C. H. Amidon	36,761
Wringing machines	W. B. Rhoades	37,007
Wringing machines, Clothes	D. W. Swift	34,276
Wringing machines, Clothes	E. Dickerman	34,459
Wringing machines, Clothes	K. H. Elliott	34,885
Wringing machines, Clothes	W. Joslin	36,218
Wringing machines, Clothes	N. Peebles	36,362
Wringing machines, Clothes	S. F. Emerson	36,458
Wringing machines, Clothes	H. W. Putnam	36,728
Wringing machines, Clothes	G. D. Robinson	36,860
Wringing machines, Clothes	S. Squires	36,983

Invention or Discovery.	Name of Patentee.	No.
Wringing machines, Rollers for	S. R. Wing	35,283
Wringing machine, Cylinder	S. A. Bailey	35,072
Wringing and washing machine	J. Hodkinson and O. C. Smith	36,615
Wringing and washing machine	J. S. Lash	36,658
Writing case and checker-board combined	H. C. Small	34,168
Writing desk	C. Monson	34,312
Writing tablets	P. Shaw	34,664
Y.		
Yarn for warps	J. A. Rhodes	35,262
Yarns to the action of liquids, Submitting	P. Heilman	34,494
Yokes, Ox	T. D. Lakin	36,882
Yokes and fastenings, Bell	J. P. Cowing	36,944
Z.		
Zinc for use in paints, Preparation of white oxide of.	G. T. Lewis	36,414
Zinc, Working silicious and other calamine ores of.	J. Jenkins and G. H. Cook	34,146
Zinc, iron, and copper, Composition metal of	A. Birkhole	34,621

DESIGNS.

A.		
Anklet	J. W. Bush	1,572
Anklet	J. W. Burt	1,675
Anklet, Ornamental	J. W. Burt	1,625
B.		
Bottle	P. H. Drake	1,538
Bottle	C. A. Robinson	1,665
Burial case	W. L. Washburn	1,654
Burial cases	W. W. Roberts	1,620
Burial cases	W. W. Roberts	1,621
C.		
Cane head, umbrella handle, or sword hilt	J. C. Noble	1,702
Cards, Backs of playing	L. J. Cohan	1,599
Carpets	E. J. Ney	1,519
Carpets	E. J. Ney	1,520
Carpet pattern	H. G. Thompson	1,525
Carpet pattern	H. G. Thompson	1,526
Carpet pattern	H. G. Thompson	1,526
Carpet pattern	H. G. Thompson	1,527
Carpet pattern	H. G. Thompson	1,528
Carpet pattern	H. G. Thompson	1,529
Carpet pattern	H. G. Thompson	1,530
Carpet pattern	H. G. Thompson	1,531
Carpet pattern	H. G. Thompson	1,532
Carpet pattern	H. G. Thompson	1,533
Carpet pattern	H. G. Thompson	1,534
Carpet pattern	H. G. Thompson	1,535
Carpet pattern	H. G. Thompson	1,536
Carpet pattern	H. G. Thompson	1,537
Carpet pattern	E. J. Ney	1,542
Carpet pattern	E. J. Ney	1,543
Carpet pattern	E. J. Ney	1,544
Carpet pattern	E. J. Ney	1,545
Carpet pattern	E. J. Ney	1,546

Invention or Discovery.	Name of Patentee.	No.
Carpet pattern	E. J. Ney	1,550
Carpet pattern	E. J. Ney	1,551
Carpet pattern	E. J. Ney	1,552
Carpet pattern	E. J. Ney	1,553
Carpet pattern	E. J. Ney	1,554
Carpet pattern	E. J. Ney	1,555
Carpet pattern	E. J. Ney	1,556
Carpet pattern	H. G. Thompson	1,583
Carpet pattern	H. G. Thompson	1,584
Carpet pattern	H. G. Thompson	1,585
Carpet pattern	H. G. Thompson	1,586
Carpet pattern	H. G. Thompson	1,587
Carpet pattern	H. G. Thompson	1,588
Carpet pattern	H. G. Thompson	1,589
Carpet pattern	H. G. Thompson	1,590
Carpet pattern	H. G. Thompson	1,591
Carpet pattern	H. G. Thompson	1,592
Carpet pattern	H. G. Thompson	1,593
Carpet pattern	H. G. Thompson	1,594
Carpet pattern	E. J. Ney	1,618
Carpet pattern	E. J. Ney	1,619
Carpet pattern	E. J. Ney	1,630
Carpet pattern	E. J. Ney	1,631
Carpet pattern	E. J. Ney	1,632
Carpet pattern	E. J. Ney	1,633
Carpet pattern	E. J. Ney	1,634
Carpet pattern	E. J. Ney	1,635
Carpet pattern	E. J. Ney	1,636
Carpet pattern	E. J. Ney	1,637
Carpet pattern	E. J. Ney	1,638
Carpet pattern	E. J. Ney	1,639
Carpet pattern	E. J. Ney	1,640
Carpet pattern	E. J. Ney	1,641
Carpet pattern	E. J. Ney	1,642
Carpet pattern	E. J. Ney	1,643
Carpet pattern	E. J. Ney	1,644
Carpet pattern	E. J. Ney	1,645
Carpet pattern	E. J. Ney	1,646
Carpet pattern	E. J. Ney	1,647
Carpet pattern	E. J. Ney	1,648
Carpet pattern	E. J. Ney	1,649
Carpet pattern	E. J. Ney	1,650
Carpet pattern	E. J. Ney	1,666
Carpet pattern	E. J. Ney	1,667
Carpet pattern	E. J. Ney	1,668
Carpet pattern	E. J. Ney	1,669
Carpet pattern	E. J. Ney	1,670
Carpet pattern	E. J. Ney	1,671
Carpet pattern	E. J. Ney	1,672
Carpet pattern	E. J. Ney	1,673
Carpet pattern	H. G. Thompson	1,683
Carpet pattern	H. G. Thompson	1,684
Carpet pattern	H. G. Thompson	1,685
Carpet pattern	H. G. Thompson	1,686
Carpet pattern	H. G. Thompson	1,687
Carpet pattern	H. G. Thompson	1,688
Carpet pattern	H. G. Thompson	1,689
Carpet pattern	H. G. Thompson	1,690
Carpet pattern	H. G. Thompson	1,691
Carpet pattern	H. G. Thompson	1,692
Carpet pattern	H. G. Thompson	1,693
Carpet pattern	E. J. Ney	1,694
Carpet pattern	E. J. Ney	1,698
Carpet pattern	E. J. Ney	1,699
Chair	H. L. Seymour	1,660

Invention or Discovery.	Name of Patentee.	No.
Chair, Arm	W. G. Phelps	1,574
Chandelier	W. H. Green and P. J. Clark	1,569
Checker or chess board	W. S. Hill and S. T. Reed	1,658
Chess or checker board	W. S. Hill and S. T. Reed	1,658
Chimneys, Lamp	J. W. Schreiber	1,682
Clock case	G. B. Owen	1,541
Clock case	J. B. Woodruff	1,547
Clock case	G. B. Owen	1,574
Clock case	H. Terheene	1,575
Clock case	G. B. Owen	1,608
Clock case	G. B. Owen	1,664
Clock case	G. B. Owen	1,674
Clock case front	F. S. Otis	1,578
Clock case front	F. S. Otis	1,579
Coffin	J. B. Sargent	1,571
Coffins, &c., Lifting handle plate for	S. D. Arnold	1,624
Crucifix	N. P. Maker	1,570
F.		
Fence	T. G. Bering	1,601
Fence and gateway for burial plots	J. Sharkey	1,613
Fireplace frame	P. H. Jackson	1,603
Fire-work, Hand frame for	W. Bock	1,612
Floor-cloth pattern	V. Myer	1,540
Floor-cloth pattern	D. Foyer	1,577
Floor-cloth pattern	J. Paterson	1,582
Floor-cloth pattern	J. Hutchinson	1,616
Floor-cloth pattern	D. Foyer	1,677
Floor-cloths, &c., Pattern	D. Foyer	1,695
Fork and spoon handle	T. H. Gibney	1,657
Fruit can	W. W. Lyman	1,617
G.		
Gas-burner, Stove	A. C. Barstow	1,563
Gateway and fence for burial plots	J. Sharkey	1,615
H.		
Hames fastening	H. A. Fowler	1,576
Handles, Fork and spoon	H. Hobbard	1,548
Handles of table cutlery	N. E. Russell	1,681
Handle or lift	S. D. Arnold	1,517
Hat, Military	W. St. Warburton	1,701
Hook, Coat and hat	J. B. Sargent	1,560
I.		
Inkstand	M. Phineas	1,652
L.		
Lamp bracket	W. H. Green and P. J. Clark	1,614
Lantern	J. J. Marcy	1,549
Lincoln, President, Medallion of	S. Ellis	1,653
Loom, Top rail of weavers'	G. Crompton	1,562
M.		
Medallion of President Lincoln	S. Ellis	1,653
Monument	J. B. Earnshaw	1,518
P.		
Photograph preserver	J. Dean and S. P. Emerson	1,521
Photographic background	S. A. Holmes	1,615
Postage stamp case	J. Gault	1,627

Invention or Discovery.	Name of Patentee.	No.
S.		
Sewing machine frame	J. G. Folsom and B. D. Whitney	1,602
Shawls, &c., Border of	M. Townsend	1,663
Shoes	G. Taylor and J. Lusty	1,611
Show-case	W. H. Core	1,567
Show-case, Base of a	C. Headra	1,628
Spoon	J. R. Wermett	1,580
Spoon and fork handle	F. H. Gibney	1,657
Spoon shanks	G. I. Mix	1,651
Stationery, (The camp fire)	J. Rogers	1,597
Stationery, (The checker players)	J. Rogers	1,596
Stationery, (The town pump)	J. Rogers	1,598
Stationery, (The village schoolmaster)	J. Rogers	1,596
Statuette group, (Camp life)	J. Rogers	1,559
Statuette group, (The picket guard)	J. Rogers	1,558
Stove	T. H. Wood, H. S. and A. S. Hubbell.	1,513
Stove	C. J. Shepard	1,523
Stove	J. Eiberweiser and E. Kettler	1,524
Stove	W. W. Stanard	1,565
Stove	W. W. Stanard	1,566
Stove	W. L. McDowell	1,605
Stove	W. L. McDowell	1,606
Stove	R. Wheeler and S. A. Bailey	1,623
Stove	J. D. Marshbank	1,697
Stove, Cooking	W. W. Stevens	1,557
Stove, Cook's	R. Ham	1,509
Stove, Cook's	T. H. Wood, H. S. and A. S. Hubbell.	1,514
Stove, Cook's	T. H. Wood, H. S. and A. S. Hubbell.	1,515
Stove, Cook's	C. W. Palmer	1,564
Stove, Cook's	C. H. Frost	1,568
Stove, Cook's	C. J. Woolson	1,581
Stove, Cook's	J. Martuo and J. Horton	1,607
Stove, Cook's	J. F. Rathbone	1,609
Stove, Cook's	G. Smith and H. Brown	1,610
Stove, Cook's	S. H. Ransom	1,655
Stove, Cook's	J. R. Hyde	1,659
Stove, Cook's	H. S. and A. S. Hubbell	1,678
Stove, Cook's	H. S. and A. S. Hubbell	1,679
Stove, Cook's	H. S. and A. S. Hubbell	1,680
Stove, Gas-burner	A. C. Barstow	1,563
Stove, Oven	D. Hathaway	1,512
Stove, Parlor	A. C. Barstow	1,600
Stove, Plates of a	E. J. Cridge	1,508
Stove, Plates of a	S. W. Gibbs	1,656
Stove, Plates of a	N. S. Vedder and E. Ripley	1,661
Stove, Plates of a cook's	G. Smith and H. Brown	1,622
Stove plate	J. Heobzar	1,696
Stove plates	W. W. Stanard	1,561
Stove plates, Cook's	D. Hathaway	1,511
Stove plates, Parlor	L. W. Harwood	1,510
Sword blades, Trade mark on	J. W. Hayes	1,539
Sword hilt, cane head, or umbrella handle	J. C. Noble	1,702
T.		
Tassel tops	G. L. Kelty	1,604
Trade mark	J. Williams	1,516
Trade mark	T. W. Evans	1,626
Trade mark	H. G. Tyer	1,629
Trade mark	J. B. Chargois	1,676
Trade mark on sword blades	J. W. Hayes	1,539
Trellis frame	S. Hayes	1,522

Invention or Discovery.	Name of Patentee.	No.
U.		
Umbrella handle, cane head, or sword hilt	J. C. Noble	1,702

REISSUES.

A.		
Aniline, Red dye from	J. Renard	1,359
Aniline to produce a red coloring matter or dye, Treating.	J. Renard	1,358
B.		
Bedsteads, Folding	T. B. Bleecker	1,284
Beer and other liquids, Cooling	H. Migeon	1,265
Beer and other liquids, Cooling	H. Migeon	1,266
Beer and liquids, Cooling	H. Migeon	1,267
Bells, Sleigh, to straps, Attaching	A. G. Bevin	1,298
Boots and shoes, Sewing soles to	H. Dunham, jr	1,363
Boot-trees	C. T. Eames	1,292
Boot and shoe tip	J. M. Allen	1,339
Brace, Ball	H. S. Bartholomew	1,351
Bran from flour, Separating	A. Swift	1,280
Burial cases	G. W. Scollay	1,330
C.		
Cables for telegraphs, Submarine	W. H. Horstmann	1,342
Cables for telegraphs, Submarine	W. H. Horstmann	1,343
Cannon	D. Treadwell	1,272
Cans, Preserve	J. C. Lefferts	1,353
Caps, Varnishing percussion	American Flask and Cap Company	1,257
Capstans for ships, Compound	C. Perley	1,345
Car for railroads, Metallic	La Mothe Life-Preserving Iron Car Company.	1,346
Cars, Collecting fares on street railway	J. H. Dennis	1,258
Cars, Iron	R. Montgomery	1,325
Carpet-beating machines	D. Holmes	1,307
Carriage props	C. Thomas and D. P. Nichols	1,331
Chairs, Railroad	J. H. Snyder	1,316
Chairs, Railroad, Bending the lip of wrought iron.	S. A. Cox	1,327
Chimneys for lamps, Mica	L. Horning	1,308
Chimney, Lamp	W. L. Fish	1,368
Clover, Hulling and threshing	J. C. Birdsell	1,299
Cribs for horses	H. Eddy	1,300
Cutting apparatus, Meat	J. G. Perry	1,278
D.		
Dampers for stoves, Ventilating	J. Magee and W. J. Towne	1,355
E.		
Elevator, Hay	F. F. Fowler	1,341
Elevator, Water	S. L. Avery	1,320
Emery sticks and wheels, Composition for the manufacture of.	T. J. Mayall	1,288
Engine, Steam	F. E. Sickels	1,260
Engines, Steam, for propelling street passenger cars.	R. H. Long	1,253
Engines, Steam, for propelling street passenger cars	R. H. Long	1,254

Invention or Discovery.	Name of Patentee.	No.
F.		
Fence, Wire	H. Jenkins	1,338
Fertilizers	St. John O. Doris	1,261
Fire-arms, Revolving	E. Allen	1,268
Flour from bran, Separating	A. Swift	1,280
Food made from beans, pears, &c., Articles of	S. R. Andres	1,340
Furnaces, Hot-air	D. G. Littlefield	1,303
Furnaces, Steam-boiler	B. Crawford	1,357
G.		
Galvanic soles	C. Mettam	1,286
Governors for steam engines	S. H. Miller	1,285
Grain-separators	J. L. Booth	1,354
Grates for stoves	S. H. Ransom & Co	1,365
H.		
Handles, Fastening tools to their	J. E. Emerson	1,304
Harvesters	B. Densmore	1,262
Harvesters	J. Swartz	1,313
Harvesters	J. Swartz	1,314
Harvesters	J. Swartz	1,315
Harvesters, Grain and grass	J. E. Brown, S. S. Bartlett, and T. H. Dodge.	1,281
Harvesters, Grain and grass	J. E. Brown, S. S. Bartlett, and T. H. Dodge.	1,282
Harvesters, Grain and grass	J. E. Brown, S. S. Bartlett, and T. H. Dodge.	1,283
Hat bodies, Felting	I. D. Condit	1,301
Hat bodies, Manufacturing	H. A. Burr	1,318
Horse powers	A. W. Gray	1,322
Horse powers, Double-geared	C. Russell	1,302
Hulling and threshing clover	J. C. Birdsell	1,299
I.		
Inkstand	A. P. Griffing	1,293
J.		
Journal boxes	D. H. Dotterer	1,352
L.		
Latches and locks	C. A. Miller	1,360
Leg, Artificial	D. Bly	1,367
Locks and latches	C. A. Miller	1,362
Looms, Operating shuttle-boxes of	R. B. Goodyear	1,310
Lubricating compounds	A. Lebkucher	1,329
M.		
Milk, Concentrating and pressing sweet	G. Boiden, jr	1,306
Moulds, Mode of heating	Richardson, Burnum & Co	1,344
Moulds for moulding cement pipes	H. Knight	1,277
Mowing and reaping machines. (See *Reaping and mowing machines.*)		
P.		
Pan for sugar-juices and solutions, Evaporating.	P. W. Gates, T. Chalmers, and D. R. Fraser.	1,350
Paper-stuff, Preparations of	C. S. Buchanan	1,295
Pegging machines	M. Marshall	1,273

Invention or Discovery.	Name of Patentee.	No.
Pegging machines	M. Marshall	1,296
Pencils, &c., Rubber head for lead	W. W. Shaw	1,319
Piano-forte actions	H. Steinway, jr.	1,271
Pipes, Moulds for moulding cement	H. Knight	1,277
Planters, Seed	L. Moore	1,336
Polishing sticks and wheels, Composition for the manufacture of flexible.	T. J. Mayall	1,289
Presses, Oil	J. J. Eckel	1,324
Presses, Printing	S. Harroun & Co	1,279
Projectiles	C. T. James	1,275
Propellers, Double cone marine	J. R. Baylis	1,321
R.		
Reaping and mowing machines	L. J. W. S. and C. H. McCormick	1,255
Reaping and mowing machines	L. J. W. S. and C. H. McCormick	1,256
Registers, Hot-air	E. A. and W. Tuttle and J. S. Bradley.	1,346
Rocking toy	J. A. Crandall	1,287
Rollers for wringing machines	Jno. J. Haley	1,270
S.		
Saccharine juices, Evaporating	D. B. Neal and G. E. House	1,294
Saccharine juices. (See also, *Sugar-juices.*)		
Safes, Burglar proof	J. B. Floyd	1,311
Salt, Manufacture of common	T. Spencer	1,290
Salt, Manufacture of common	T. Spencer	1,291
Screen for flour bolts	D. Landis	1,328
Sewing-machine	W. W. Wacle	1,264
Shuttle-boxes for looms, Operating	R. B. Goodyear	1,310
Silicates, Preparation of Soluble	Liquid Quarts Co	1,297
Skirt, Hoop	G. Mallory	1,276
Sleigh-bells to straps, Attaching	A. G. Bevin	1,298
Soles, Galvanic	C. Mettom	1,286
Stoves	D. G. Littlefield	1,332
Stoves	D. G. Littlefield	1,333
Stoves	D. G. Littlefield	1,334
Stoves	D. G. Littlefield	1,335
Stoves	J. Magee and W. J. Towne	1,356
Sugar, Manufacture of cube	G. Finken	1,269
Sugar-juices, Defecating and evaporating	P. W. Gates, T. Chalmers, and D. R. Fraser.	1,349
Sugar-juices and solutions, Evaporating	P. W. Gates, T. Chalmers, and D. R. Fraser.	1,348
Sugar-juices and solutions by means of steam, Evaporating	P. W. Gates, T. Chalmers, and D. R. Fraser.	1,347
Sugar-juices. (See also, *Saccharine juices.*)		
T.		
Teeth, Artificial, Manufacture of	S. S. White	1,305
Teeth, Cultivator	D. B. Rogers	1,274
Threshing and hulling clover	J. C. Birdsell	1,299
V.		
Valves, Governor	H. D. Snow	1,309
Valves of steam engines, Opening and closing	F. E Sickels	1,263
Varnishing percussion caps	American Flask and Cap Co	1,257
W.		
Wheels, Car	N. K. Wade and J. Kaye	1,323
Wheels, Car, Cast-metal	G. G. Lobdell	1,317
Wheels, Water, Horizontal	H. Kalbach and M. Andrews	1,259

Invention or Discovery.	Name of Patentee.	No.
Wheels and emery sticks, Composition for the manufacture of.	T. J. Mayall	1,288
Wheels and polishing sticks, Composition for the manufacture of flexible.	T. J. Mayall	1,289
Wheels for fly-wheels, and Metallic	N. K. Wade and J. Kaye	1,326
Willows, Peeling	M. Eastbrook, J. M. Wood, and E. A. Brownson.	1,337
Winnowers, Grain and seed	G. Westinghouse	1,366
Wood-bending machine	J. C. Morris	1,312
Wringer, Clothes	N. A. Rhoads	1,360
Wringer, Clothes	N. A. Rhoads	1,361
Wringing machines, Rollers for	John J. Haley	1,270

EXTENSIONS.

B.		
Boot trees	J. Howe	5,876
Boxes for the journals of railway cars	J. Lightner	5,935
Brakes for railroad cars	C. B. Turner	5,918
Buildings, Warming and ventilating	H. Button	5,958
Bungs, Cutting	J. Kirby	5,759
C.		
Churns	E. Spain	5,585
E.		
Elevator and scoop	E. Morris	5,966
F.		
Furnaces, Hot-air	R. Hillson	5,459
G.		
Grain-separators	A. Smith	5,509
I.		
India rubber, Hollow articles of	C. Goodyear	5,536
M.		
Mouldings, Machinery for making	A. T. Serrell	3,575
P.		
Planters, Seed	L. Moore	5,522
Ploughs	S. Hall	5,529
Presses	D. Dick	5,840
S.		
Scoop and elevator	E. Morris	5,966
W.		
Wheels, Annealing and cooling cast-iron car	A. Whitney	5,531

LETTER

FROM

THE COMMISSIONER OF PATENTS,

TRANSMITTING

HIS ANNUAL REPORT FOR THE YEAR 1862.

FEBRUARY 5, 1863.—Laid on the table, and ordered to be printed.

UNITED STATES PATENT OFFICE,
January 30, 1863.

SIR: The Commissioner of Patents, by the 14th section of the act of March 3, 1837, is required to lay before Congress a detailed statement of the expenditures and payments by him made from said (patent) fund, a list of all patents which shall have been granted during the preceding year, designated under proper heads, the subjects of such patents, and furnishing an alphabetical list of the patentees, with their places of residence, a list of all patents which shall have become public property during the same period, together with such other information of the state and condition of the Patent Office as may be useful to Congress or to the public.

In conformity with these requirements of law, I submit the following:

No. 1.

Number of applications during the year 1862	5,038
Number of patents granted, including designs and reissues	3,521
Number of caveats filed	824
Number of applications for extension of patents	41
Number of patents extended	22
Number of patents expired 31st December, 1862	648

Of the patents granted, there were:

To citizens of the United States	3,438
To subjects of Great Britain	39
To subjects of the French Empire	33
To subjects of other foreign governments	11
Total	3,521

No. 2.

Statement of money received during the year, viz:

On applications for patents, reissues, &c.	$153,818 00
For copies and for recording assignments	11,081 50
Appropriation, July 16, 1862, to refund expenses of printing patents	50,855 49
Total	215,754 99

No. 3.

Statement of expenditures from the patent fund.

Salaries	$77,404 93
Contingent expenses	55,057 98
Temporary clerks	44,462 48
Withdrawals	5,140 00
Refunding money paid by mistake	570 00
Judges in appeal cases	175 00
Total	182,810 39

No. 4.

Statement of the condition of the patent fund.

Amount to the credit of the patent fund January 1, 1862	$5,416 55
Amount paid in during the year	215,754 99
Total	221,171 54
Deduct expenditures during the same period	182,810 39
Leaving in the treasury January 1, 1863, the sum of	38,361 15

No. 5.

Table exhibiting the business of the office for twenty-six years, ending 31st December, 1862.

Years.	Applications filed.	Caveats filed.	Patents issu'd.	Cash received.	Cash expended.
1837	----------	----------	435	$29,289 08	$33,506 98
1838	----------	----------	520	42,123 54	37,402 10
1839	----------	----------	425	37,260 00	34,543 51
1840	765	228	473	38,056 51	39,020 67
1841	847	312	495	40,413 01	52,666 87
1842	761	291	517	36,505 68	31,241 48
1843	819	315	531	35,315 81	30,776 96
1844	1,045	380	502	42,509 26	36,344 73
1845	1,246	452	502	51,076 14	39,395 65
1846	1,272	448	619	50,264 16	46,158 71
1847	1,531	533	572	63,111 19	41,878 35
1848	1,628	607	660	67,576 69	58,905 84
1849	1,955	595	1,070	80,752 78	77,716 44
1850	2,193	602	995	86,927 05	80,100 95
1851	2,258	760	869	95,738 61	86,916 93
1852	2,639	996	1,020	112,056 34	95,916 91
1853	2,673	901	958	121,527 45	132,869 83
1854	3,324	868	1,902	163,789 84	167,146 32
1855	4,435	906	2,024	216,459 35	179,540 33
1856	4,960	1,024	2,502	192,588 02	199,931 02
1857	4,771	1,010	2,910	196,132 01	211,582 09
1858	5,364	943	3,710	203,716 16	193,193 74
1859	6,225	1,097	4,538	245,942 15	210,278 41
1860	7,653	1,084	4,819	256,352 59	252,820 80
1861	4,643	700	3,340	137,354 44	221,491 91
1862	5,038	824	----------	215,754 99	182,810 39

By act of Congress of March 2, 1861, the Commissioner of Patents was authorized to print ten copies of the descriptions and of the drawings of the patents issued by the office. After a trial of eight months the work was discontinued on account of the expense, and the section of the law authorizing the printing was subsequently repealed. During the past year I have ordered correct and well digested abstracts of the patents to be prepared by an experienced examiner in the office, with the claims and reduced copies of the drawings attached, which accompany this report. The publication of the same will supply a great want now felt by the inventors of the country. The reports of 1859 and 1860 were issued in a style which reflected credit upon the office, and were of great value to all interested in the improvements in the arts and manufactures. The usual appropriation for the preparation of the report of 1861 would enable the office to complete the series for which there are daily demands.

I take the liberty of inviting the attention of Congress to the other matters treated of in my report for 1862, to which I have nothing to add at present.

Very respectfully, your obedient servant,

D. P. HOLLOWAY,
Commissioner.

Hon. GALUSHA A. GROW,
Speaker of the House of Representatives.

ALPHABETICAL LIST OF PERSONS WHOSE PATENTS FOR INVENTIONS AND DISCOVERIES HAVE EXPIRED DURING THE YEAR 1862.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
5417	Abbott, John	Hoes, making	Jan. 25, 1848	II.
	Adams, C. (*See* Livingston, Roggen & Adams.)			
5466	Adams, Isaac	Pipe, lead, machinery	Mar. 8, 1848	II.
5426	Adams, Samuel	Axles for carriages	Feb. 1, 1848	X.
5513	Alden, Manoah	Blowers for furnaces	April 18, 1848	XI.
5634	Aldrich, Elisha F	Propelling vessels	June 13, 1848	VII.
5718	Allen, Henry	Motion, governor for regulating	Aug. 22, 1848	XIII.
5745	Allen, Horatio	Cut-off	Aug. 29, 1848	VI.
5817	Allen, James E	Tobacco leaves, machinery for cleaning	Oct. 3, 1848	I.
5949	Allen, Oliver	Harpoon gun	Dec. 5, 1848	XXII.
5497	Allen, William, jr	Fastening and operating window blinds	April 4, 1848	II.
5658	Alter, David, and Edward Gillespie	Bromine, manufacture of	July 5, 1848	IV.
5733	Anderson, John	Iron, machinery for straightening railroad	Aug. 29, 1848	II.
5700	Andrews, Ezekiel O. P	Rudder-head, spring clutch applied to a	Aug. 10, 1848	VII.
	Anthony, Dany & Co. (*See* W. L. Sanderson.)			
5562	Arnold, Addison	Wool and cotton beater, cylinder for cleaning	May 9, 1848	III.
5769	Arnold, Job	Horse power, method of applying governor to	Sept. 12, 1848	XIII.
	Arnold, Reynolds. (*See* Hill & Arnold.)			
	Arrowsmith, George A. (*See* Walter Hunt.)			
5775	Austin, Anthony H	Freezers, ice cream	Sept. 19, 1848	IV.
5546	Ayer, Elisha	Boilers, steam locomotive	May 2, 1848	VI.
5888	Ayres, Isaac W	Boilers, steam, water door for	Oct. 31, 1848	VI.
5545	Babbitt, Isaac	Gold, machinery for separating	May 2, 1848	II.
	Bailey. (*See* Foster & Bailey.)			
5617	Baker, C. B	Brick presses	June 6, 1848	XV.
5760	Baker, Isaac	Chair seats, machine for dressing	Sept. 12, 1848	XVII.
5715	Baker, Nathan	Cultivators	Aug. 15, 1848	I.
5662	Baker, Vincent	Bedsteads, folding	July 11, 1848	XVII.
5906	Baldwin, Cyrus, assignor to J. & E. Baldwin	Crackers, machine for cutting and stamping	Nov. 7, 1848	XVII.
	Baldwin, M. W. (*See* Lyman & Baldwin.)			
5587	Baldwin, M. W., and A. S. Lyman	Rakes, horse	May 16, 1848	I.
5764	Baldwin, Stephen	Washing machines	Sept. 12, 1848	XVII.
	Ball, S. D. (*See* Patton & Ball.)			
5431	Ball, William	Faucets	Feb. 1, 1848	XI.
5567	Ballard, Stephen	Churns, atmospheric	May 16, 1848	I.
5992	Ballou, Otis D., administrator of A. G. Bartlett	Drills, grain	Dec. 26, 1848	I.
5761	Bamford, William	Looms, knitting needles of	Sept. 12, 1848	III.
5436	Barker, John	Furnaces, air-heating	Feb. 8, 1848	V.
5462	Barlow, Elisha	Pumps	Feb. 29, 1848	XI.
5947	Barrow, Horatio N	Composition for pastel vat used in dyeing	Dec. 5, 1848	IV.
	Barstow, A. C., & Co. (*See* Apollos Richmond.)			
	Bartlett, A. G. (*See* Otis D. Ballou.)			
5983	Bartlett, Russell D	Lathes for turning hoe handles, &c	Dec. 26, 1848	XIV.
5952	Bassford, Abraham	Billiard tables, cushions for	Dec. 5, 1848; antedated June 4, '48.	XXII.
5693	Batson, John W	Fasteners for windows, catches, &c	Aug. 1, 1848	II.

5731	Beach, Joseph, Chas., and Thos., and W. G. R. Mowry	Flax, &c., machinery for cutting and preparing for carding	Aug. 29, 1848	III.
5982	Beach, Waldren	Corn shellers	Dec. 26, 1848	XIII.
2045	Beard, Ebenezer	Screw propeller	April 10, 1841	VII.
5916	Beal, William, jr	Mills for breaking and grinding	Nov. 14, 1848	XIII.
	Beaver, Samuel, jr. (*See* Knaur & Beaver, jr.)			
5859	Beeching, George	Cultivators	Oct. 17, 1848	I.
	Beetley, Jacob. (*See* W. P. Cresson, *et al.*)			
7209	Bell, Hugh	Balloons and their appendages	Mar. 26, 1850; patented in England Nov. 23, 1848.	XI.
5464	Benham, Ansel	Horse collars, blocks for	Mar. 8, 1848	XVI.
5799	Benson, Hosea	Staves, machinery for dressing	Sept. 26, 1848	XIV.
5691	Benson, John, and James Day	Pans, sugar	Aug. 1, 1848	IV.
5777	Bentz, Samuel	Wheat hulling preparatory to grinding	Sept. 19, 1848	I.
5837	Berwick, R. F	Screw-blank machine	Oct. 10, 1848	II.
5574	Bigelow, Amos	Driers, grain	May 16, 1848	V.
5754	Bigelow, E. B	Cloth, apparatus for stretching and drying	Sept. 5, 1848	III.
5429	Billings, D. S	Cultivators, wheel	Feb. 1, 1848	I.
5599	Birdsell, James	Clover hullers	May 23, 1848	I.
5716	Birkinbine, Henry P. M	Rams, water valves of	Aug. 15, 1848	XI.
5646	Blair, Sherman	Sofa beds	June 27, 1848	XVII.
5485	Blake, Edward S	Electrical machines	Mar. 28, 1848	VIII.
5490	Blake, William	Compositions, fire and weather proof, &c	Mar. 28, 1848	IV.
5710	Blake, William P	Fish-hooks, spring	Aug. 15, 1848	XXII.
	Blanchard, Thomas	Turning gunstocks	Jan. 20, 1820	XIX.
5973	Blanchley, Neri	Ploughs	Dec. 19, 1848	I.
5954	Bleecker, William E., and Samuel D. Vose	Stove flues	Dec. 5, 1848	V.
5520	Boardman, David	Organ pipes	April 18, 1848	XVIII.
5931	Boone, William	Grass-cutting machine	Nov. 21, 1848	I.
5640	Booth, John	Brick presses	June 20, 1848	XV.
5439	Bosworth, George S	Stoves, cooking	Feb. 8, 1848	V.
	Bowers, George P. (*See* William Lavery *et al.*)			
5907	Bowman, B., and A. Kauffman	Filling barrels with flour	Nov. 7, 1848	XII.
5942	Bradshaw, John H	Sawing machines	Nov. 28, 1848	III.
	Brafin, E. (*See* Manœl & Brafin.)			
5535	Brailly, Cosme	Bathers, utero-vaginal	May 9, 1848	XX.
5534	Brand, C. H	Cloth, manufacture of velvted	April 25, 1848	III.
5661	Brewer, N. A. F	Gold and silver, refining	July 11, 1848	II.
5564	Brower, Sterling	Shingles, machinery for shaving	May 16, 1848	XIV.
5922	Brewster, Iram	Ploughs, hill-side	Nov. 14, 1848	I.
	Brewster, William. (*See* John Drummond.)			
5721	Bronson, Austin	Stoves, cooking	Aug. 22, 1848	V.
5822	Brown, Andrew D	Saddles, harness	Oct. 3, 1848	XVI.
5912	Brown, George, assignor to David W. Seeley	Axles and bolsters, couplings for	Nov. 21, 1848	X.
5483	Bruce, David, jr	Type-smoothing machines	Mar. 28, 1848	XVIII.
5967	Buck, Darius	Stoves, cooking	Dec. 12, 1848	V.
	Buckley, B. S. (*See* Ellis & Buckley.)			
6440	Bucklin, Theodore G	Preparing metallic patterns for castings	May 8, 1849; antedated Nov. 8, '48.	II.
5838	Burges, Oscar S	Buckles, harness	Oct. 10, 1848	XVI.
5975	Buston, William H	Horse-collar blocks	Dec. 19, 1848	XVI.
5824	Butterfield, Edwin, and George W. Clarke; Clarke assignor to Butterfield.	Mills for grinding	Oct. 3, 1848	XIII.
7474	Butts, Edward A., and Richard F. Stevens	Stoves, cooking	Mar. 14, 1848	V.

Persons whose patents for inventions have expired.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
5600	Butts, Jehiel	Threshing machines	May 23, 1848	I.
5872	Caldwell, Robert	Saddles	Oct. 24, 1848	XVI.
5621	Carpenter, Daniel	Furnaces for steam-boilers	June 6, 1848	VI.
5611	Carpenter, Sands C., and Wm. A. Peters; Peters assignor to Carpenter.	Gates, sluice for locks	May 30, 1848	IX.
5860	Carrell, John J.	Mounting harness saddle	Oct. 17, 1848	XVI.
5481	Case, Chauncey W	Turning, apparatus for	Mar. 21, 1848	XIV.
5814	Cass, Milo M	Fire-arm, self-loading, self-capping, repeating	Sept. 26, 1848	XIX.
5609	Chamberlain, Dexter H., assignor to Thos. J. Whittemore.	Awls and other similar tools, handles for	May 30, 1848	II.
5560	Chapin, Nathan	Churns, atmospheric	May 9, 1848	I.
5936	Chapin, Nathan	Mills, cider	Nov. 21, 1848	XIII.
5902	Chapman, W. Z. W., and J. W	Instrument sharpener, universal	Nov. 7, 1848	XXII.
5597	Cheek, Moses D	Presses	May 23, 1848	XII.
	Cheeney, William H. (*See* Elijah P. Penniman.)			
5550	Chilson, Gardner	Furnaces, hot-air	May 2, 1848	V.
	Clarke, G. W. (*See* Butterfield & Clarke.)			
5740	Clark, Henry	Gins, cotton	Aug. 29, 1848	III.
5704	Clark, Henry G	Stoves, air-heating	Aug. 10, 1848; antedated Feb. 10, '48	V.
5930	Clark, Oliver	Scythe fastenings	Nov. 21, 1848	II.
8055	Clay, William	Apparatus for rolling tapered metallic rods	April 22, 1851; England Dec. 16, '48.	II.
9315	Clement, William H	Sugar-boiling apparatus	Oct. 12, 1852; England Nov. 21, '48.	IV.
	Coe, Lyman W. (*See* Thomas Hollister.)			
2054	Coes, Loring	Wrenches, screw	April 16, 1841	II.
5903	Cohen, Lewis J.	Composition of slate-pencils	Nov. 7, 1848	IV.
5796	Colburn, Josiah M	Looms, pickers for	Sept. 26, 1848	III.
5720	Cole, James	Furnaces, boiler and other	Aug. 22, 1848	VI.
5959	Cole, James	Dough, breaking and kneading	Dec. 12, 1848	XVII.
5620	Cole, Wm. A	Planes, joiners'	June 6, 1848	XIV.
	Collier, C. S. (*See* Sampson & Collier.)			
	Collins Co. (*See* Elisha K. Root.)			
5801	Colver, Lewis W	Hemp, machinery for breaking and dressing	Sept. 26, 1848	III.
5915	Comstock, Wm. A	Size, buckwheat, manufacture of	Nov. 14, 1848	III.
5538	Connelly, Patrick	Spark arresters	April 25, 1848	VI.
5953	Cook, James, assignor to Lyman Kingsley	Wheel, car	Dec. 5, 1848	X.
5950	Cook, Mary Ann B	Irons, smoothing	Dec. 5, 1848	II.
5863	Coons, Matthias P	Fence, iron hurdle	Oct. 17, 1848	IX.
5881	Coons, Matthias P	Drilling machines, rock	Oct. 24, 1848	IX.
2125	Copeland, Charles W	Engines, steam, low-pressure, &c	June 11, 1841	V.
5458	Cowles, Josiah	Vise, bench	Feb. 22, 1848	II.
5619	Cowles, Proctor P	Benches, joiners', hooks for	June 6, 1848	XIV.
5909	Cox, Haywood	Ploughs, hill-side	Nov. 7, 1848	I.
	Craddock, Joseph T. (*See* Tough & Craddock.)			
5965	Cradit, Nathaniel	Stoves, Franklin	Dec. 12, 1848	V.
	Cram, Stephen B. (*See* Jno. Johnson.)			
	Crane, James H. (*See* Renton & Crane.)			

5670	Crane, Zenas M	Paper, machinery for cutting	July 18, 1848	III.
5755	Criswell, Robert, jr	Cultivator point	Sept. 5, 1848	I.
5882	Cronce, Samuel	Leather straps, machinery for creasing	Oct. 24, 1848	XVI.
2321	Crosby, Pearson	Saw-mills for resawing boards, &c	Nov. 3, 1841	XIV.
5901	Crousilhe, Cadet	Wood, machinery for raising, sawing, splitting	Nov. 7, 1848	XIV.
5794	Crum, John, assignor to H. L. Pierson	Screw-threading machine	Sept. 19, 1848	II.
5803	Crum, John, assignor to H. L. Pierson	Screws, wood, machines for turning heads of	Sept. 26, 1848	II.
5698	Culver, David	Furnaces for hot-air	Aug. 10, 1848	V.
5690	Cummings, James, sr	Spark-arresters	Aug. 1, 1848	VI.
5499	Currier, Alanson C., and A. Bradway	Staves, machinery for jointing	April 4, 1848	XIV.
5445	Curtis, Ralph D	Stores, counting-rooms, &c., for preserving in case of fire	Feb. 15, 1848	IX.
5934	Cushing, Daniel	Harvesting machines	Nov. 21, 1848	I.
5878	Dane, James	Brick presses	Oct. 24, 1848	XV.
5625	Danforth, Wm. H	Copper sheathing, &c., machinery for cutting and punching	June 13, 1848	II.
2171	Davenport, Charles, and Albert Bridges	Railroad carriages, &c	May 4, 1841	X.
	Davis, Abbot R. (*See* Taylor & Davis.)			
5904	Day, Horace H. and F. D. Hayward. Hayward assignor to Day	Suspenders and shoulder braces	Nov. 7, 1848	XXI.
5543	Day, Horace H	Gutta-percha fabrics, preparing, in imitation of patent leather	May 2, 1848	IV.
5846	Day, H. W	Type moulds	Oct. 10, 1848	XVIII.
5969	Day, Jacob G	Bell telegraph	Dec. 19, 1848	II.
	Day, James. (*See* Benson & Day.)			
5622	Densmore, Byron	Cutter, straw	June 6, 1848	I.
5629	Deshon, Daniel, 2d	Cutters, meat	June 13, 1848	XI.
5770	Deshon, Daniel, 2d, and E. Z. Webster	Pump, double bellows	Sept. 12, 1848	XII.
5856	Dick, David	Presses	Oct. 17, 1848	XI.
5423	Dillon, Robert	Pumps connecting with hydraulic presses or rams	Feb. 1, 1848	XI.
5451	Dillon, Robert	Bales of goods, roping, machine for	Feb. 22, 1848	XXII.
5563	Drummond, John, assignor to William Brewster	Machinery for making bullets	May 9, 1848; antedated Jan. 31, '48	XIX.
5742	Dryden, George	Turn-tables	Aug. 29, 1848	IX.
5865	Dubs, Charles H	Dentists' instruments	Oct. 17, 1848	XX.
5430	Dudley, Joseph	Faucets, molasses	Feb. 1, 1848	XI.
5420	Duncan, James L	Types, machinery for rubbing	Jan. 25, 1848	XVIII.
7394	Dunn, Arthur	Boilers, steam, galvanic regulator for	May 28, 1850. England Oct. 12, '48.	VIII.
5858	Earle, A. B	Ploughs, planting	Oct. 17, 1848	I.
5739	Easby, William	Coal, converting fine into solid lumps	Aug. 29, 1848	V.
5578	Edwards, Benjamin	Corn-shellers	May 16, 1848	XIII.
5807	Ellinwood, John B	Brakes for cars	Sept. 26, 1848	X.
5709	Ellis, Darwin, & C. T. Grilley	Fish hooks, spring	Aug. 15, 1848	XXII.
5913	Ellis, F., & B. S. Buckley	Screw jacks	Nov. 14, 1848	XII.
5842	Emerson, Frederick	Ships, ventilating	Oct. 10, 1848	VII.
5948	Emerson, George	Card teeth, machine for grinding	Dec. 5, 1848	III.
5641	Emery, John C	Bedsteads, sofa	June 20, 1848	XVII.
5648	Emmons, Calvin	Planing machine	June 27, 1848	XIV.
5571	Epply, John	Metal, machine for bending sheet	May 16, 1848	II.
5806	Evans, Henry, jr	Lanterns	Sept. 26, 1848	V.
5581	Evans, Isaac	Clevises	May 16, 1848	I.
5515	Evans, Lucius	Springs for closing doors	April 18, 1848	II.
5778	Evarts, James M	Fastener for window sash	Sept. 29, 1848	II.
5413	Fairchild, Starr	Carriage bodies, hanging	Jan. 18, 1848	X.
5456	Fairlamb, Jonas D	Leather, machine for splitting	Feb. 22, 1848	XVI.
6881	Falkman, Carl	Distilling and rectifying spirits	Nov. 20, 1849. In Sweden Aug. 5, '48	IV.

Persons whose patents for inventions have expired.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
5943	Field, Leonard B	Stoves, cooking	Nov. 28, 1848	V.
5747	Fielenier, Joseph	Veneers, cutting into figures	Sept. 5, 1848	XIV.
5737	Fife, William	Pens, metallic	Aug. 29, 1848	XVIII.
5898	Fink, William	Saw-mills	Oct. 31, 1848	XIV.
5962	Finn, Felix A	Chimney caps	Dec. 12, 1848	V.
5920	Fish, Almond D	Coffins	Nov. 14, 1848	XXII.
5928	Fisher, Marvin W	Percussion caps, self-feeding machine for charging	Nov. 21, 1848	XIX.
5591	Fitch, Amariah H	Pumps for raising water	May 23, 1848	XI.
5582	Fitzgerald, Jesse	Safes, fire-proof	May 16, 1848	II.
5511	Foster, Ezekiel B	Stencilling, plates for	April 18, 1848	XVIII.
5505	Foster, George P	Fasteners, sash	April 11, 1848	II.
5951	Foster, John T., and L. B. Bailey	Driller, rock	Dec. 5, 1848	IX.
5938	Fowle, Charles D	Strops, razor	Nov. 28, 1848	XXI.
5984	Fry, Robert T	Latch, door, oblique	Dec. 26, 1848	II.
5443	Gage, James P	Sanding paper, machinery for	Feb. 15, 1848	III.
5602	Gage, James P	Sanding paper, sleeves for	May 30, 1848	III.
5924	Gage, James P	Book safes	Nov. 14, 1848	XVIII.
5604	Gallup, William	Stoves, cooking	May 30, 1848	V.
5453	~~Gardner, P. G~~	~~Presses~~	~~Feb. 22, 1848~~	XII.
5580	Gardner, George	Clover-seed, machine for hulling	May 16, 1848	I.
5703	Gatling, Richard J	Seed, &c., machine for sowing	Aug. 10, 1848	I.
5613	Gamne, Joseph P	Bungs, machinery for cutting	June 6, 1848	XIV.
5614	Gamne, Joseph P	Cogwheels, &c., machinery for cutting	June 6, 1848	XIII.
5476	Gazlay, Arvin H	Harness saddle	Mar. 14, 1848	XXI.
5502	Geer, Gilbert	Stoves, cooking	April 11, 1848	V.
5487	George, David	Augers, hollow	Mar. 28, 1848	XIV.
5873	George, D., and H. Robertson	Wood, cutting irregular forms in	Oct. 24, 1848	XIV.
2109	George, Wm. M	Riving and dressing shingles	May 29, 1841	XIV.
5536	Gescheidt, L. A	Pessaries	May 9, 1848	XX.
	Gibbs, William. (*See* Goodman & Gibbs.)			
5780	Gifford, Charles	Shoe pegs, preparing	Sept. 19, 1848	XVI.
5705	Gilbert, A. G	Engines, steam, valves of, arranging and combining	Aug. 10, 1848	VI.
5447	Gilbert, Levi	Teeth, artificial, plates for	Feb. 15, 1848	XX.
	Gillespie, Edward. (*See* Alter & Gillespie.)			
	Gilliford, Jno. (*See* Gruver & Gilliford.)			
	Gilliford, Jno. (*See* Toder, Gruver & Gilliford.)			
5963	Giroud, Victor	Chronometers, escapements for	Dec. 12, 1848	VIII.
5795	Glasco, Thomas	Saddle trees for carts	Sept. 19, 1848	XVI.
5976	Glynn, Ira	Fastener and sash bearer	Dec. 19, 1848	II.
5933	Goble, U. H., and A. Stuart	Harvesters	Nov. 21, 1848	I.
5489	Goodling, Wm. M	Nail, wrought, machinery	Mar. 28, 1848	II.
5980	Goodman, Allen	Turning irregular shapes, machinery for	Dec. 19, 1848	XIV.
5927	Goodman, Allen, and William Gibbs Gibbs, assignor to Goodman	Planing irregular forms	Nov. 21, 1848	XIV.
5818	Goodrich, Cornelius D	Metals, machinery for planishing and hammering	Oct. 3, 1848	II.
5940	Gordon, E. M., J. S., and W. H. Gordon, Wm. L. (*See* Graves & Gordon.)	Starch, manufacture of potato	Nov. 28, 1848	IV.
5478	Granger, R. D	Stoves, cooking	Mar. 21, 1848	V.
5986	Grant, William	Bolt-heading machines	Dec. 26, 1848	II.
5528	Graves, J., and W. L. Gordon	Casting rolls	April 25, 1848	II.
6223	Gray, James A	Piano-fortes	Mar. 27, 1849; antedated Sept. 27, '48	XVIII.
5989	Green, Thomas	Spokes, sawing	Dec. 26, 1848	XIV.
5939	Green, W. K., jr	Jacquard	Nov. 28, 1848	III.
5618	Gregg, Isaac	Presses, brick	June 6, 1848	XV.
5829	Griffin, Zachariah	Mills for grinding	Oct. 3, 1848	XIII.
	Grilley, Chas. T. (*See* Ellis & Grilley.)			
5516	Grimes, James S	Lanterns and lamps, combining	April 18, 1848	V.
	Griswold, Horace. (*See* Smith & Griswold.)			
5800	Gross, George, jr	Cultivators	Sept. 26, 1848	I.
5411	Gruver, E., and John Gilliford	Threshing and cleaning clover-seed, machinery for	Jan. 12, 1848	I.
	Gruver, E. (*See* Toder, Gruver & Gilliford.)			
5811	Guild, Harvey	Hemp brakes	Sept. 26, 1848	III.
5594	Haertler, Jacob	Threshing machines	May 23, 1848	I.
5981	Haight, David B	Ploughs	Dec. 26, 1848	I.
5781	Hall, Henry G	Telegraph, &c., posts for	Sept. 19, 1848	IX.
5495	Hall, J. Bishop	Painting on translucent surfaces	Mar. 28, 1848	XVIII.
5830	Hall, Levi	Saddle frame	Oct. 3, 1848	XVI.
5686	Hall, William	Lock, powder-proof	Aug. 1, 1848	II.
5835	Hamann, Augustus	Spark-arresters	Oct. 10, 1848	VI.
8872	Hamilton, James	Mills for curvilinear sawing	April 13, 1852; England June 1, 1848, to Thos. H. Barber.	XIV.
5553	Hammond, Isaac	Umbrellas, cane	May 9, 1848	XXI.
5711	Hanchett, M. W	Chairs, surgical or dental operating	Aug. 15, 1848	I.
5427	Hanson, David D	Faucets, molasses	Feb. 1, 1848	XI.
5717	Harper, L. A	Straw-cutters	Aug. 15, 1848	I.
5452	Harris, Joseph, jr	Boxes and axles, anti-friction	Feb. 22, 1848	XIII.
5479	Hart, Alex. H	Tuyeres	Mar. 27, 1848	II.
5688	Hartman, Andrew	Tapestry, printing yarns for manufacture of	Aug. 1, 1848	XVIII.
5659	Hathaway, B. G. H	Threshing and cleaning grain, machines for	July 5, 1848	I.
5440	Haven, Wm. D. and P. Muholtz	Coal-breakers	Feb. 8, 1848	V.
5525	Hawes, Russell L	Printing paper hangings	April 18, 1848	XVIII.
5743	Hawley, Abel	Excavator, floating	Aug. 29, 1848	IX.
5956	Hawley, E. E	Cultivators, hand	Dec. 5, 1848	I.
5891	Haworth, James and John	Looms	Oct. 31, 1848	III.
5839	Hayes, John P	Chimney caps	Oct. 10, 1848	V.
	Hayward, Francis D. (*See* Day & Hayward.)			
5970	Hecker, John H	Liquors, apparatus for drawing and measuring	Dec. 19, 1848	XI.
5649	Helme, James G	Bedstead fastenings	June 27, 1848	XVII.
5645	Hemphill, F. M., and R. H. Knox	Water wheels	June 20, 1848	XI.
5836	Hemphill, F. M., and R. H. Knox	Mills for grinding	Oct. 10, 1848	XIII.
5879	Hidden, Enoch	Ships, light	Oct. 24, 1848	VII.
5501	Hill, A. V., and R. Arnold	Boot planes	April 11, 1848	XVI.
5540	Hill, William B	Valves, balance for steam-engines	April 25, 1848	VI.
5656	Hinkley, Benj	Bedsteads	July 5, 1848	XVII.
5899	Hinman, David	Hydraulic apparatus for transmitting power	Oct. 31, 1848	XI.
5418	Hitchings, A. E	Heating buildings, hot water apparatus for	Jan. 25, 1848	V.
5554	Hollister, Thos., assignor to L. W. Coe	Dies, formation of	May 9, 1848	II.

Persons whose patents for inventions have expired.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
5790	Holmes, Reuben A	Buckles, harness	Sept. 19, 1848	XVI.
5527	Holmes, Stephen, 2d	Windlass, ship's	April 25, 1848	XII.
5805	Holt, E. H	Water, method of raising	Sept. 26, 1848	XI.
5684	Horn, Edwin B	Lamp fountains of glass, moulds for making argand	Aug. 1, 1848	V.
5507	Horn, G. H. & B. H., assignors to D. C. Moorhead	Magneto-electric machine for giving shocks	April 11, 1848	VIII.
	Howard, Benona. (*See* Lewis Smith.)			
2299	Howe, Abraham, and S. S. Grannis	Manufacture of wire heddles	Oct. 11, 1841	III.
5771	Howe, James K	Vessels, theory of construction of	Sept. 19, 1848	VII.
16436	Howe, Elias, jr	Sewing-machine	Jan. 20, 1857; England July 26, '48	III.
5465	Howey, James	Buckles, harness	Mar. 8, 1848	XVI.
5786	Hull, John G	Tillers, method of attaching	Sept. 19, 1848	VII.
5712	Hungerford, Spencer	Furnaces, boiler	Aug. 15, 1848	VI.
5699	Hunt, Walter	Cartridge, method of attaching ball to a wooden	Aug. 10, 1848	XIX.
5701	Hunt, Walter, assignor to G. A. Arrowsmith	Ball, loaded	Aug. 10, 1848	XIX.
5730	Hurst, Cornelius	Presses, steam cotton	Aug. 22, 1848	XII.
5623	Hutton, P. H., and Wm. Huston	Propellers	June 6, 1848	VII.
5535	Isham, Joseph G	Sand paper	April 25, 1848	III.
6760	Isham, Norman M., and Erastus E. Morey	Process of making steel, &c	Oct. 2, 1849; England Nov. 2, '48	II.
5695	Jackson, Timothy D	Metals, sheet, alloys for	Oct. 31, 1848	II.
5415	Jackson, William	Stoves, cooking	Jan. 18, 1848	V.
5748	Jenks, Warren	Traps, method of setting steel	Sept. 5, 1848	XXII.
5833	Jennings, R. B. and A. C	Rakes, horse	Oct. 3, 1848	I.
5667	Jessup, Gilbert	Threshing machines	July 18, 1848	I.
8101	Jobson, Robert	Reflecting fire-place	May 20, 1851; England Dec. 28, '48	V.
5926	Johnson, Abraham and Henry	Filter stop-cock	Nov. 14, 1848	XI.
5498	Johnson, Benjamin L	Blowers, furnaces, &c	April 4, 1848	XI.
5568	Johnson, Charles F	Telegraphs, electric	May 16, 1848	VIII.
5894	Johnson, John, assignor to S. B. Cram	Drill, hand	Oct. 31, 1848	II.
5561	Johnson, W. H., and Thos. Lewis	Churns, atmospheric	May 9, 1848	I.
5467	Jones, John A. and Alfred F	Boots, cutting	Mar. 14, 1848	XVI.
5576	Jones, John A. and Alfred F	Candles, machine for dipping	May 16, 1848	IV.
5689	Jones, John A. and Alfred F	Bedstead fastenings	Aug. 1, 1848	XVII.
5809	Jones, Joseph	Boring machines	Sept. 26, 1848	XIV.
5945	Jones, Seneca S	Sausage stuffers	Nov. 28, 1848	XVII.
5626	Judd, Oliver S	Window-sash, pulleys for	June 13, 1848	IX.
	Judson, Isaac. (*See* Pardee & Judson.)			
	Judson, Lyman. (*See* James D. Willoughby.)			
5419	Kalbfleisch, Martin	Prussiates of potash and soda, manufacture of	Jan. 25, 1848	IV.
	Kase, Simon P. (*See* Homer Parmelee.)			
	Kauffman, A. (*See* Bowman & Kauffman.)			
5484	Kellogg, Edward, administrator of George C. Kellogg	Wool pickers	Mar. 28, 1848	III.
5706	Kellogg, Lansing	Locks, guards or tumblers for	Aug. 15, 1848	II.
5937	Kelly, Henry	Jacquard	Nov. 28, 1848	III.
5738	Kelsey, Francis	Millstones	Aug. 29, 1848	XIII.
5654	Kelsey, Franklin	Springs, door	June 27, 1848	II.
	Kent, Joseph C. (*See* Ottiwell & Kent.)			
5547	Kentish, William A	Anchors	May 2, 1848	VII.
5798	Kephart, Peter	Ice-houses, upper floors of	Sept. 26, 1848	XXII.
5685	Kershaw, Edward	Locks, powder-proof	Aug. 1, 1848	II.
5577	Kimman, John	Stones, machinery for dressing	May 16, 1848	XV.
	Kinsley, Lyman. (*See* James W. Cook.)			
5791	Kinsley, Rhodolphus	Locks and escutcheons	Sept. 19, 1848	II.
5774	Kirk, Lewis	Hammer, steam	Sept. 19, 1848	II.
5884	Knapp, Zephaniah	Fence posts, method of fastening wire to	Oct. 24, 1848	IX.
5517	Knaur, Elias, and Samuel Beaver, jr	Driers, grain	April 18, 1848	V.
5767	Kneeland, J. C., and Geo. M. Phelps	Paper, machinery for cutting and arranging	Sept. 12, 1848	III.
5493	Knight, Isaac	Cars, railroad, running gear of	Mar. 28, 1848	X.
	Knox, Robert H. (*See* Hemphill & Knox.)			
5708	Kyle, James	Lock, door, divided bolt	Aug. 15, 1848	II.
5422	Lafitte, John S	Spark-arresters	Feb. 1, 1848	VI.
8910	Lamb, Andrew, and W. A. Summers	Studs, space for flues of sheet-water space boilers	April 27, 1852; England Dec. 9, '48	VI.
5749	Lathrobe, Benjamin H	Rail, compound	Sept. 5, 1848	IX.
5792	Law, Harvey	Staves, rived, machinery for planing	Sept. 19, 1848	XIV.
5628	Lawson, Peter, and A. H. Sherman	Shuttles, weavers'	June 13, 1848	III.
5802	Learned, Charles	Washing machines	Sept. 26, 1848	XVII.
5725	Leighton, David A	Ram, hydraulic	Aug. 22, 1848	XI.
	Lewis, Thomas. (*See* Johnson & Lewis.)			
5650	Lewis, Spencer	Bedstead fastenings	June 27, 1848	XVII.
5812	Lewis, Spencer	Bedsteads, cutting-screws on rails of	Sept. 26, 1848	XVII.
5841	Livingston, Roggen & Adams	Moulder's flasks	Oct. 10, 1848	XV.
5889	Livingston, Roggen & Adams	Telegraph wires, insulating supports for	Oct. 31, 1848	IX.
5544	Loomis, Morgan	Bellows, smith's	May 2, 1848	XI.
5988	Lovegrove, Thomas J	Pipe, method of employing centrifugal force in casting of iron	Dec. 26, 1848	II.
5985	Low, John H	Piano-forte, action	Dec. 26, 1848	XVIII.
5635	Lucas, Charles	Garments, draughting and measuring	June 13, 1848	XXI.
5508	Lucas, A. B	Animals, traps for	April 11, 1848	XXII.
5851	Lyle, Thomas	Yarn, machinery for doubling and twisting	Oct. 17, 1848	III.
5789	Lyman, A. S., and M. W. Baldwin	Penholders and nibs, fountain	Sept. 19, 1848	XVIII.
	Lyman, A. S. (*See* Baldwin & Lyman.)			
5668	Lynch, Edward	Evaporators and condensers	July 18, 1848	VI.
5736	Mackey, John	Axes, &c., machinery for dressing	Aug. 29, 1848	II.
5727	Mackey, T. S	Stoves, cooking	Aug. 22, 1848	V.
6572	McLardey, William, and Joseph Lewis	Live spindles and fliers	July 3, 1849; England May 9, '48	III.
5875	Magoun, Joseph, assignor to New England Glass Co	Glass moulding	Oct. 24, 1848	XV.
5823	Mallett, E. J	Bell telegraph	Oct. 3, 1848	II.
5434	Mavœl, Chas. De, and E. Brafin; Brafin assignor to Mavœl	Sugar making	Feb. 22, 1848	IV.
5424	Many, William V	Wheels, car	Feb. 1, 1848	X.
5808	Marden, George H	Curtain, suspension, window	Oct. 17, 1848	XVII.
	Marden, Jeremiah A. (*See* Norfolk, Standley & Marden.)			
5523	Markham, Lurnard P	Books, &c., machinery for trimming	April 18, 1848	XVIII.
5892	Marquis, Thomas	Fliers for roving, &c	Oct. 31, 1848	III.
5819	Marsh, Joseph M	Printing presses	Oct. 3, 1848	XVIII.
5960	Masser, H. B	Freezers, ice cream	Dec. 12, 1848	IV.
5744	Maull, James	Sails, manufacture of canvass for	Aug. 29, 1848	VII.
5971	Maxam, Samuel, assignor to R. Smith	Sad-irons, furnaces for heating	Dec. 19, 1848	II.
5784	Maxson, John	Spring door	Sept. 19, 1848	II.
5541	McCleary, Andrew	Spark arresters	May 2, 1848	VI.

Persons whose patents for inventions have expired.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
5741	McLaughlin, John and Thomas G.	Motion, converting rectilinear into rotary	Aug. 29, 1848	XIII.
5141	Meginnis, William E	Skirts, ladies' corded	Feb. 8, 1848	XXI.
5435	Merrick, Solyman	Punch, revolving spring	Feb. 8, 1848	II.
5707	Merrick, Solyman	Wrenches, screw	Aug. 15, 1848	II.
5666	Merrill, Thomas C	Sawing irregular shapes, machinery for	July 11, 1848	XIV.
5855	Metcalf, W. W	Ploughs	Oct. 17, 1848	I.
5900	Mills, John	Wagons	Oct. 31, 1848	X.
9831	Mitchell, Sir Thomas L.	Propelling vessels	July 5, 1853; England Nov. 5, '48	VII.
5473	Mix, John	Spoons	Mar. 14, 1848	II.
5598	Mix, William	Spoons, manufacture of	May 23, 1848	II.
5469	Monaghan, R. E	Yens and nays, modes of taking	Mar. 14, 1848	XXII.
5559	Moody, Zenas R	Doors, weather strips for	May 9, 1848	IX.
5583	Moore, Emery N	Releasing horses, &c., from stables in case of fire, &c	May 16, 1848	XXII.
5606	Morris, Edmund	Latches for fastening doors	May 30, 1848	II.
5549	Moseley, Thomas W. H	Fasteners, sash	May 2, 1848	II.
5636	Mott, Jordan L	Castings, process of chilling	June 13, 1848	II.
5749	Mott, Jordan L	Stoves, cooking	Aug. 22, 1848	V.
	Moury, W. G. R. (*See* Bench & Moury.)			
5494	Murray, Elijah	Windlasses	Mar. 28, 1848	XII.
	New England Glass Company. (*See* Joseph Magoun.)			
5867	Nichols, Caroline C	Flowers, manufacture of artificial	Oct. 17, 1848	XXI.
5532	Nicolls, Gustavus A	Locomotives	April 25, 1848	VI.
5787	Nicolls, Gustavus A	Locomotives	Sept. 29, 1848	VI.
5450	Norfolk, E. L., S. S. Standley, and J. A. Marden	Looms	Feb. 22, 1848	III.
5632	North, William B	Presses, cotton	June 13, 1848	XII.
5831	North, William B	Mills for grinding	Oct. 3, 1848	XIII.
5533	Norton, A. P	Mills for crushing and grinding	April 25, 1848	XIII.
5530	Norton, Faulkner J	Horse powers	April 25, 1848	XIII.
5826	Norton, Lewis	Mills for grinding	Oct. 3, 1848	XIII.
5438	Nutting, Rufus, 2d	Organ pianos	Feb. 8, 1848	XVIII.
5893	Oakley, Nathaniel	Mills, hanging runner stones in	Oct. 31, 1848	XIII.
5551	Ogle, Joseph	Kilns, brick	May 9, 1848	XV.
5914	Oldroyd, William	Odometers	Nov. 14, 1848	VIII.
5808	Orcutt, Eleazer	Kilns, lime	Sept. 26, 1848	XI.
5987	Orcutt, Lysander A	Stoves, cooking	Dec. 26, 1848	V.
5750	Ormiston, John	Ploughs	Sept. 5, 1848	I.
5566	Ottiwell, William, and J. C. Kent	Doors, weather strips for	May 16, 1848	IX.
5912	Overton, R. Carlton	Lampwicks, tubes for raising	Nov. 7, 1848	V.
5944	Paddock, David	Mills for grinding	Nov. 28, 1848	XIII.
2171	Page, George	Mills, saw, circular, portable	July 16, 1841	XIV.
5919	Paine, Thomas D	Musical instruments, rotary valve, wind	Nov. 14, 1848	XVIII.
5713	Pardee, L., and I. Judson	Staves, machinery for jointing	May 15, 1848	XIV.
5692	Parker, T. H	Heating apartments	Aug. 1, 1848	V.
5991	Parker, T. H	Stoves	Dec. 26, 1848	V.
5643	Parkhurst, S. R	Carding machines	June 20, 1848	III.

5852	Parks, Stephen, jr	Pipe, lead, archimedean machine	Oct. 17, 1848	II.
5728	Parmelee, Homer, assignor to S. P. Chase	Pumps, valves and air-chests for double-cylinder	Aug. 22, 1848	XI.
5871	Paton, Thomas	Printing, making mills and skeleton dies for	Oct. 24, 1848	XVIII.
5639	Pattee, Dummer	Cultivators	June 20, 1848	I.
5680	Patton, John M., and S. D. Ball	Stoves, cooking	July 25, 1848	V.
5762	Payne, Miles R	Shingle machines	Sept. 12, 1848	XIV.
5925	Pease, Francis S	Harvesting machine	Nov. 14, 1848	I.
5797	Peck, Benjamin	Looms, jaw-temples for	Sept. 26, 1848	III.
5864	Peck, Thomas	Spring door	Oct. 17, 1848	II.
5477	Perley, Charles	Windlasses, skids'	Mar. 21, 1848	XII.
1999	Pennock, Moses and Samuel	Planters, seed	Mar. 12, 1841	I.
5779	Penfield, E. H	Grummet, metallic	Sept. 19, 1848	VII.
2014	Perrin, William	Dovetails, square-joint, machine for cutting	Mar. 24, 1841	XIV.
5596	Perry, Alonzo D	Mail-bags, fastenings	May 23, 1848	XII.
5751	Perry, Alonzo D	Lock, portable	Sept. 5, 1848	II.
	Peters, William A. (*See* Sands C. Carpenter.)			
5972	Peugeot, Peter and George	Fringe, machine for cutting paper	Dec. 19, 1848	XXII.
	Phelps, George M. (*See* Kneeland and Phelps.)			
5783	Phelps, John W	Supporters, spine-abdominal	Sept. 19, 1848	XX.
	Pierson, Henry L. (*See* John Crum.)			
5635	Pierson, Jacob	Planters, seed	July 5, 1848	I.
5977	Pirsson, Joseph P	Motive power, method of employing water for condensing steam as	Dec. 19, 1848	VI.
5312	Police, Jules	Filters	April 18, 1848	XI.
5482	Porter, Stephen	Washing machines	Mar. 21, 1848	XVII.
5697	Powers, Leonard	Hammers, claw	Aug. 1, 1848	XIV.
5434	Pratt, Daniel R	Spinning, machinery drawing rolls for	Feb. 8, 1848	III.
5961	Pratt, Daniel R	Couplings, car	Dec. 12, 1848	X.
5905	Pratt, George	Tables, extension	Nov. 7, 1848	XVII.
5757	Pratt, John M	Flocks, mode of incorporating with flannel, &c	Sept. 5, 1848	III.
2225	Pullman, Lewis	Buildings, removing, machines for	Aug. 2, 1841	XII.
2083	Putnam, James R	Machinery for removing bars, &c., from harbors, &c	May 6, 1841	IX.
5492	Pyo, Sylvester M	Fastenings for doors	Mar. 28, 1848	II.
5782	Queen, Christian V	Forge, improvements on Queen's portable	Sept. 19, 1848	II.
5446	Randel, Abraham	Planters, potato	Feb. 15, 1848	I.
1980	Ransom, F., and N. Wenman	Engines, fire	Feb. 13, 1841	XI.
5696	Ray, Towler M	Springs, India-rubber and pneumatic	Aug. 1, 1848	X.
5683	Reed, Cheney	Hinges and fastenings for window-blinds	Aug. 1, 1848	II.
2035	Reed, Jesse	Pumps	April 16, 1841	XI.
	Reip, Alfred H. (*See* William G. Young.)			
5607	Remington, George R	Winnowing machines	May 30, 1848	I.
5702	Renton, James, and J. H. Crane	Bloomery, fire, closed	Aug. 10, 1848	II.
5557	Reynolds, William	Locks for doors	May 9, 1848	II.
5853	Richards, Charles J	Nail, cylindrical-wrought, machine	Oct. 17, 1848	II.
5929	Rieffel, Charles, and N. Thorn	Dividers, or measuring compasses	Nov. 21, 1848	VIII.
5867	Riley, W. W	Pantaloon straps, &c., fastening for	Oct. 31, 1848	XXI.
5448	Roberts, George E	Washing machines	Feb. 15, 1848	XVII.
	Robertson, H. (*See* George & Robertson.)			
5820	Robertson, John	Lead, method of manufacturing sheet	Oct. 3, 1848	II.
5896	Robinson, Joel	Shoe-pegging machines	Oct. 31, 1848	XVI.
5679	Robinson, Robert	Radiators	July 25, 1848	V.
5608	Robison, Charles H	Hinges for doors, &c	May 30, 1848	II.
5815	Rodgers, John F	Cars, railroad	Sept. 26, 1848	X.

Persons whose patents for inventions have expired.

No	Name of patentee.	Invention or discovery.	Date.	Class.
5664	Rodman, Samuel	Chimneys, construction of factory	July 11, 1848	V.
5670	Rodman, Samuel	Lamps	Oct. 17, 1848	V.
5612	Roe, Edward R.	Telegraph manipulations	May 30, 1848	VIII.
5442	Rogers, William	Hollow ware, moulding	Feb. 8, 1848	II.
	Roggen, J. J. (*See* Livingston, Roggen & Adams.)			
5642	Romans, John	Cutters, straw	June 20, 1848	I.
5731	Root, Elisha K., assignor to the Collins Co	Axes, machinery for dressing	Aug. 22, 1848	II.
5669	Root, James	Stove, cooking	July 18, 1848	V.
5850	Roper, Lewis	Ether, apparatus for administering	Oct. 10, 1848	XX.
5584	Ross, W., and W. E. Rutter	Locomotives, tenders for	May 16, 1848	VI.
5416	Rouse, Wanton	Spinning frames	Jun. 25, 1848	III.
5877	Rowand, John R	Pessaries	Oct. 24, 1848	XX.
5978	Rowe, Ebenezer	Ichthycolla, manufacture of	Dec. 19, 1848	IV.
5832	Rowse, Edward	Vessels, method of steering	Oct. 3, 1848	VII.
5475	Russ, Horace P.	Pavements, substrata for	Mar. 14, 1848	IX.
5862	Russell, John	Telegraph, domestic	Oct. 17, 1848	IX.
	Rutter, Wm. H. (*See* Ross & Rutter.)			
5586	Sabbaton, Alfred	Machines, brick	May 16, 1848	XV.
5825	Sampson, E., and C. S. Collier	Scales for weighing	Oct. 3, 1848	XII.
5883	Saunders, Eli	Rakes, horse	Oct. 24, 1848	I.
5921	Schley, John	Gins, roller, cotton	Nov. 14, 1848	III.
5732	Schnebly, William and Thomas	Engines, steam, rotary	Aug. 24, 1848	VI.
5631	Schomacker, John H.	Piano-fortes	June 13, 1848	XVIII.
7385	Schule, Christian	Form of rubbing surfaces for regulating abrasion	May 21, 1850; England, Nov. 23, '48.	XIII.
5816	Scoville, Hiram H	Driers, grain	Sept. 26, 1848	V.
5821	Seaman, E. C.	Freezers, cream	Oct. 3. 1848	IV.
	Seeley, David W. (*See* George Brown.)			
5845	Seeley, Samuel J.	Shot plug	Oct. 10, 1848	XIX.
5911	Seibert, George	Propeller, ducks-foot	Nov. 7, 1848	VII.
5804	Seitz, Henry	Bridles	Sept. 26, 1848	XVI.
5647	Semple, A. C.	Racks and pinions	June 27, 1848	XIII.
5941	Shaler, Reuben	Knife polishers	Nov. 28, 1848	II.
5847	Shaw, Jacob, jr.	Spinning, wheels for	Oct. 10, 1848	III.
5486	Shelabarger, Benjamin F.	Pinnes, joiners'	Mar. 28, 1848	XIV.
5687	Shelabarger, Benjamin F.	Harrows	Aug. 1. 1848	I.
	Sherman, Aaron H. (*See* Peter Lawson.)			
5726	Shreve, Wilson	Trap, fly	Aug. 22, 1848	XXII.
5765	Sickles, Frederick E.	Power, motive, method of controlling	Sept. 12, 1848	XIII.
5848	Sines, Charles	Shellers, corn	Oct. 10, 1848	XIII.
2275	Slocum, Samuel	Machine for sticking pins into paper	Sept. 30, 1841	II.
5979	Smith, David M.	Springs, method of preserving shape of, in the process of tempering steel.	Dec. 19, 1848	II.
5449	Smith, Edwin	Stoves, cooking	Feb. 15, 1848	V.
5677	Smith, E. J., and H. Griswold	Ploughs, hill-side	July 25, 1848	I.
5526	Smith, F. C.	Ploughs	April 25, 1848	I.

5460	Smith, J. Elnathan	Propellers for vessels	Mar. 14, 1848	VII.
5558	Smith, J. Elnathan	Railroads	May 9, 1848	IX.
5496	Smith, Lewis, assignor to Benona Haward	Match-splints, machinery for splitting	Mar. 28, 1848	XXII.
5827	Smith, Marvin	Cutlery, table	Oct. 3, 1848	II.
	Smith, Reuben. (*See* Samuel Maxam.)			
5772	Smith, Thomas B.	Refrigerators	Sept. 19, 1848	XXII.
5768	Smith, William	Shingles, machinery for sawing	Sept. 12, 1848	XIV.
	Snider, John. (*See* Winslow & Snider.)			
5630	Snyder, Elisha S.	Grain, machinery for separating straw from	June 13, 1848	I.
5908	Solis, Richard	Cloth, manufacture of elastic	Nov. 7, 1848	III.
5861	Southwick, George F.	Umbrellas and parasols, locking	Oct. 17, 1848	XXI.
6199	Spangenberg, John	Draining and blanching sugar	Mar. 20, 1849; antedated Sept. 20, '48	IV.
6219	Spangenberg, John	Clarification of cane juices	Mar. 27, 1849; antedated Sept. 20, '48	IV.
5673	Speakman, Thomas S.	Springs, combination of, with back chain of carts, &c.	July 18, 1848	X.
5866	Spencer, Kirby	Drills, dentists'	Oct. 17, 1848	XX.
5676	Spencer, Thomas	Evaporators, furnaces for	July 25, 1848	V.
5674	Sprout, Erastus T.	Springs, carriage, combined	July 18, 1842	X.
5518	Stafford, James R.	Driers, grain	April 18, 1848	V.
5519	Stafford, James R.	Driers, grain	April 18, 1848	V.
5594	Stafford, James R.	Driers, grain	April 18, 1848	V.
	Standley, Samuel S. (*See* Norfolk, Standley & Marden.)			
5869	Starr, Nathan	Files, engine for cutting	Oct. 17, 1848	II.
5752	Stearns, Edward J.	Railroad switch, self-acting	Sept. 5, 1848	IX.
5773	Stearns, Henry A.	Cotton batting, sizing and drying	Sept. 19, 1848	III.
5428	Stebbins, Erastus	Faucets, molasses	Feb. 1, 1848	XI.
5758	Stephenson, William	Locks, door	Sept. 12, 1848	II.
5766	Stephenson, William	Locks, door	Sept. 12, 1848	II.
5569	Stevens, A. H.	Shellers, corn	May 16, 1848	XIII.
5890	Stevens, James	Boiling and steaming, cooking utensils for	Oct. 31, 1848	V.
	Stevens, Richard F. (*See* Butts & Stevens.)			
5644	Stevens, R. L. and F. B.	Vessels, increasing speed of	June 20, 1848	VII.
1950	Stevens, R. L. and F. B.	Engine, steam	Jan. 25, 1841	VI.
	Stevens, Stephen F. (*See* Underwood & Stevens.)			
5810	Stillman, Abel	Sets, saw	Sept. 26, 1848	II.
5552	Stillman, Paul	Gauges, steam and vacuum	May 9, 1848	VI.
5714	Stoddard, Oren	Bee-hives	Aug. 15, 1848	I.
5719	Stowell, B. T.	Machine, ditching	Aug. 22, 1848	IX.
5633	Streeter, Samuel	Wheels, water	June 13, 1848	XI.
	Stuart, A. (*See* Goble & Stuart.)			
5681	Stumer, Charles	Iron, enamels for	July 25, 1848	II.
2190	Sturdevant, Lewis G.	Gin, cotton	July 24, 1841	III.
6243	Sturgis, John I.	Machine, type-casting	Mar. 27, 1849; antedated Sept. 27, '48	XVIII.
5506	Sutton, Jackson	Lamps	April 11, 1848	V.
5756	Sweetland, George	Machines, pulp	Sept. 5, 1848	III.
5843	Swett, James H.	Spikes, machine for making	Oct. 10, 1848	II.
5661	Swingle, Alfred	Machine, boring and mortising	July 11, 1848	XIV.
5857	Swope, John A.	Fence, flood	Oct. 17, 1848	IX.
5722	Talt, Augustus H	Wood, cooking by waste heat of iron furnaces	Aug. 22, 1848	V.
5521	Talbot, Lemuel T.	Hinges, sustaining, opening, closing and fastening window-blinds	April 18, 1848	II.
2296	Tatham, B., jr., and G. N	Pipes or tubes of lead, &c., machinery for making	Oct. 11, 1841	II.
5503	Taylor, Jesse	Machines, smut	April 11, 1848	XIII.
5854	Taylor, John P.	Battery, floating	Oct. 17, 1848	XIX.

Persons whose patents for inventions have expired.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
5974	Taylor, Samuel, and A. R. Davis	Blocks, brush, machine for boring	Dec. 19, 1848	XVII.
7623	Thimmonier, Barthelemy, sr., assignor to Philip May	Machine, sewing	Sept. 3, 1850; England Feb. 9, 1848	III.
5794	Thompson, Henry G	Engines, steam, rotary	Aug. 22, 1848	VI.
	Thompson, Nathan, jr. (*See* West & Thompson.)			
	Thorn, N. (*See* Rieffel & Thorn.)			
5410	Thurston, John	Machine, winnowing	Jan. 6, 1848	I.
5897	Tilghman, Richard A	Alkaline chromates, manufacture of	Oct. 31, 1848	IV.
5471	Tough, John S., and J. T. Craddock	Refrigerators	Mar. 14, 1848	XXII.
5638	Tower, John H	Grain, drying, kilns for	June 20, 1848	V.
5570	Towson, Nathan	Bricks	May 16, 1848	XV.
5657	Tracy, Luther	Seraphines	July 5, 1848	XVIII.
5723	Tucker, John E	Crimps, boots	Aug. 22, 1848	XVI.
5433	Tupper, Lewis	Wool, machinery for compressing fleeces of	Feb. 8, 1848	III.
5491	Tupper, Lewis	Machines, washing	Mar. 28, 1848	XVII.
5886	Turner, John	Machines, shingle	Oct. 31, 1848	XIV.
5455	Turner, Joseph	Machinery, spinning	Feb. 22, 1848	III.
5627	Tyhurst, Robert	Machines, smut	June 13, 1848	XIII.
5813	Underwood, John, and Stephen F. Stevens; Underwood assignor to Stevens.	Scales, platform	Sept. 26, 1848	XII.
5542	Van Anden, William	Machines, rivet	May 2, 1848	II.
5785	Van Dewater, Henry	Wheels and shutes, water	Sept. 19, 1848	XI.
5776	Van Dorn, Charles H	Hemp, apparatus for rotting	Sept. 19, 1848	III.
5695	Vaughn, J. C., and J. F. Winslow	Pipe, iron, machinery for welding	Aug. 1, 1848	II.
5874	Vedder, John J	Water, raising, apparatus for	Oct. 24, 1848	XI.
5425	Vedder, J. J., and H. Vine	Buckets, raising and tilting	Feb. 1, 1848	XI.
	Vose, Samuel D. (*See* Bleecker & Vose.)			
5470	Wallace, Robert	Spoons, manufacture of	Mar. 14, 1848	II.
5610	Ward, Jonathan W	Presses, brick	May 30, 1848	XV.
5615	Ward, Jonathan W	Clay, tempering	June 6, 1848	XV.
5955	Waring, Geo. E	Stoves, cooking, plates for boiler holes	Dec. 5, 1848	V.
5968	Waring, Geo. E	Stoves, parlor	Dec. 12, 1848	V.
5444	Warner, Henderson	Brooms, making, machinery for	Feb. 15, 1848	XVII.
5603	Warren, David	Machine, winnowing	May 30, 1848	I.
5588	Warren, Edmund	Machines, threshing	May 23, 1848	I.
5548	Warrington, John R	Shellers, corn	May 2, 1848	XIII.
5675	Waterman, Nathaniel	Stoves, cooking, portable	July 18, 1848	V.
5793	Waterman, Nathaniel	Refrigerators	Sept. 19, 1848	XXII.
5573	Watson, Peter H., assignor to N. S. Wheeler	Churns	May 16, 1848	I.
5616	Watson, Peter H., assignor to W. Watson	Fans, wheat	June 16, 1848	I.
5463	Welsh, George	Fasteners, window-blind	Feb. 29, 1848	II.
5637	Wertz, Lewis	Wheels, water	June 20, 1848	XI.
5651	West, Uel, and N. Thompson, jr	Pipe, couplings for	June 27, 1848	XI.
5946	Westcott, Henry P	Pegs, wooden, machinery for making	Nov. 28, 1848	XIV.
2157	Wheeler, Alonzo and William C	Power, horse, chain, endless	July 8, 1841	XIII.
	Wheeler, Nathaniel S. (*See* Peter H. Watson.)			

2064	Whipple, Squire	Bridges, truss, iron, construction of	April 21, 1841	IX.
5923	Whitaker, Welcome	Shirts, plaiting, machines for	Nov. 14, 1848	XXI.
5412	White, Cosman	Crimps, boot	Jan. 12, 1848	XVI.
5753	Whitney, Jonathan W	Axletree	Sept. 5, 1848	X.
	Whittimore, Thos. J. (*See* D. H. Chamberlain.)			
5432	Whitworth, Joseph	Knitting, machinery for	Feb. 1, 1848	III.
5672	Wilder, Mark	Paper, machinery for cutting	July 18, 1848	III.
5885	Willoughby, Jas. D., assignor to Lyman P. Judson	Gates, method of working lock, by water-power	Oct. 24, 1848	IX.
5828	Willson, J. W	Hoisting, machines for	Oct. 3, 1848	XII.
5595	Wilmington, William	Separators, grain	May 23, 1848	I.
5472	Wilson, Ebenezer	Combs, machinery for dressing	Mar. 14, 1848	XXI.
5605	Wilson, Robert, assignor to J. T. D. Wilson	Machines, brick	May 30, 1848	XV.
5632	Wilson, Roswell	Stoves, grates for	June 27, 1848	V.
5579	Wilson, William	Doors, closing, fixtures for	May 16, 1848	II.
5421	Winchester, O. F	Shirts, making	Feb. 1, 1848	XXI.
5660	Winslow, J. F., and J. Snyder, Snyder assignor to Winslow.	Puddlers, machinery for rolling	July 5, 1848	II.
	Winslow, John F. (*See* Vaughn & Winslow.)			
5880	Winslow, Seth E	Lamp tops	Oct. 24, 1848	V.
5998	Wise, John J	Piano-forte action	Dec. 26, 1848	XVIII.
5457	Wood, Horace	Vice bench	Feb. 22, 1848	II.
6211	Woodbury, Jos. P	Machines, planing	Mar. 20, 1849; antedated Sept. 20, '48	XIV.
5514	Woodcock, Isaac	Carriages, two-wheeled, hanging bodies of	April 18, 1848	X.
5414	Woods, George	Baths, shower, folding	Jan. 18, 1848	XX.
5460	Woodward, Joshua	Machines, seed-planting	Feb. 29, 1848	I.
5537	Wright, Charles D	Saw-mills, tail blocks of	April 25, 1848	XIV.
5671	Wright, Geo. L	Paper, cutting, machinery for	July 18, 1848	III.
5500	Wright, Samuel	Umbrellas, cane	April 11, 1848	XXI.
5964	Wright, Wendell	Spinners, drawing-heads for	Dec. 12, 1848	III.
5849	Wright, William	Hats, blocking	Oct. 10, 1848	XXI.
5917	Wurm, Francis X	Furnaces for steam boilers, &c	Nov. 14, 1848	VI.
5834	Yoder, J., E. Gruves, and J. Gilliford	Planters, corn	Oct. 3, 1848	I.
7588	Young, James	Potash or soda, stannates of, processes for making	Aug. 20, 1850; England Dec. 9, '48	IV.
5665	Young, James, assignor to William Young	Ploughs, rotary	July 11, 1848	I.
5601	Young, William G., assignor to A. H. Reiss	Freezers, ice-cream	May 30, 1848	IV.

ALPHABETICAL LIST OF PERSONS WHOSE PATENTS FOR DESIGNS HAVE EXPIRED DURING THE YEAR 1862.

No.	Patentee.	Design.	Date.
723	Ames, Winslow	Fireplaces, portable	August 28, 1848.
721	Ames, Winslow	Stoves and fireplace	August 28, 1848.
728	Andrews, James, assignor to Andrews & Dixon	Grates, parlor	September 12, 1848.
697	Beesley, Jacob, and Edward J. Delany, assignors to Cresson, Stewart & Peterson	Stoves, cooking	April 7, 1848.
698	Biggins, Henry, assignor to Michael Gibney	Forks and spoons, handles	April 4, 1848.
712	Blanchard, A. J., assignor to Blanchard, Whittemore & Co	Stoves, cooking	May 30, 1848.
711	Blanchard, A. J., assignor to Blanchard, Tarbell & Co	Stoves, parlor	May 30, 1848.
746	Brown, J. C	Clock frames	December 11, 1848.
730	Chambers, G. W., assignor to P. A. Palmer	Stoves, cooking, ovens for	September 18, 1848.
726	Coggershall, William T	Stoves, cooking	September 4, 1848.
729	Conklin, James H., assignor to S. B. Sexton	Stoves	September 12, 1848.
688	Crane, M. H., assignor to Crane, Breed & Co	Coffins, metallic	January 23, 1848.
734	Crane, Martin H., assignor to Crane, Breed & Co	Burial cases	October 9, 1848.
694	Eichmeyer, Henry A	Cases, daguerreotype	February 27, 1848.
210	Fay, Henry C	Stove	Mar. 10, 1849; antedated Dec. 2, 1848.
720	Fowler, Minard H., and Enoch Jacobs	Railings, iron	August 21, 1848.
738	~~Fulton, Calvin, assignor to McClure, Bedell & Barry~~	~~Stove-plates~~	~~October 30, 1848.~~
696	Gardner, Joseph	Forks, table	March 20, 1848.
732	Gardner, Joseph, assignor to Lamson, Goodnow & Co	Knives and forks	December 25, 1848.
692	Gibbs, S. W., assignor to North, Chase & North	Stoves	February 20, 1848.
693	Gibbs, S. W., assignor to North, Chase & North	Stoves, cooking	February 20, 1848.
713	Gibbs, Samuel W., assignor to Skinner & Brothers	Stove-plates	June 26, 1848.
718	Gibbs, Samuel W., assignor to A. H. W. Arthur & Co	Stove-plates, ornamenting	August 14, 1848.
727	Gleason, Edward	Casters, table	September 12, 1848.
699	Gorham, John	Spoons	April 10, 1848.
691	Harris, C., and P. W. Zoiner	Stoves, coal	January 23, 1848.
495	Hanfbraner, John, and Henry Wass	Stoves	February 28, 1848.
724	Harris, C., and P. W. Zoiner, assignors to A. Bradley	Stoves, cooking	August 28, 1848.
749	Harris, Conrad, and Paul William Zoiner	Stoves, cooking	December 11, 1848.
748	Harris, Conrad, and Paul William Zoiner	Stoves, box, six plates	December 11, 1848.
747	Harris, Conrad, and Paul William Zoiner	Stoves, parlor, to burn coal	December 11, 1848.
745	Harris, Conrad, and Paul William Zoiner	Stoves, parlor, to burn wood	December 11, 1848.
733	Hayden, Hiram W	Daguerreotypes and other mats, ornamenting	October 9, 1848.
715	Hebbard, Henry, and John Polhamus	Spoons	July 3, 1848.
705	Hodgett, George	Water-coolers	May 22, 1848.
739	Horton, James, assignor to Liebrandt, McDowell & Co	Stoves, coal	October 30, 1848.
725	Lewis, Thomas	Trade-marks	September 4, 1848.
751	Lincoln, A. A., jr	Stoves, caboose, ships'	December 18, 1848.
700	Lorton, William B	Clock fronts	May 1, 1848.
714	Mann, Russell, assignor to George W. Eddy	Stoves, cooking	July 3, 1848.
704	Mills, Clark	Statue, equestrian	May 15, 1848.
744	Morse, J. O., and J. W. Adams	Covers, steam-tube and hot-air	November 27, 1848.
732	Newton, Orrin	Jugs, metallic covers for	October 9, 1848.
710	North, John	Birds, sewing	May 30, 1848.
740	O'Neill, Andrew, assignor to O'Neill & Hunter	Stoves	October 30, 1848.
716	Richardson, N. P	Franklin fireplace	July 31, 1848.
741	Ripley, E., and N. S. Vedder, assignors to Johnson, Cox, Lesley & Co	Stoves, cooking	October 30, 1848.
717	Rogers, W. A	Bottles and jars, labels on	August 7, 1848.
684	Smith, G., H. Brown and J. A. Read, assignors to J. G. Abbott and A. Lawrence	Stoves, cooking	January 5, 1848.
685	Smith, G., H. Brown and Joseph A. Read, assignors to J. G. Abbott and A. Lawrence	Stoves, parlor-cook	January 5, 1848.
686	Smith, G., H. Brown and J. Holzer, assignors to Abbott & Lawrence	Stoves	January 5, 1848.
702	Smith, G., H. Brown and J. A. Read, assignors to J. G. Abbott and A. Lawrence	Water-coolers	May 1, 1848.
742	Smith, G., and H. Brown, assignors to Liebrandt, McDowell & Co	Stoves, coal	November 6, 1848.
687	Titus, William D	Lanterns	January 12, 1848.
690	Vedder, N. S., and E. Ripley, assignors to G. F. Filley, of St. Louis, Missouri	Stoves for parlor	January 23, 1848.
689	Vedder, N. S., assignor to G. F. Filley	Stoves, open front, for parlor	January 23, 1848.
706	Vose, Samuel D. No. 1	Stoves, cooking	May 30, 1848.
707	Vose, Samuel D. No. 2	Stoves, cooking	May 30, 1848.
708	Vose, Samuel D. No. 3	Stoves, cooking	May 30, 1848.
709	Vose, Samuel D. No. 4	Stoves, parlor	May 30, 1848.
701	Warren, George, S. H. Swetland, and E. C. Little	Stoves, cooking	May 1, 1848.
703	Wardwell, B., E. R. Barstow, and G. C. Harkness	Stoves, cooking	May 8, 1848.
743	Wardwell, Benjamin	Stoves	November 20, 1848.
729	Wheeler, R., and S. A. Bailey	Stoves, cooking	August 28, 1848.
731	Wilson, I. H	Monuments, cast-iron	September 18, 1848.
750	Woolman, E	Hinges, strap	December 11, 1848.

ALPHABETICAL LIST OF PATENTEES OF INVENTIONS, DESIGNS, AND REISSUES, FOR THE YEAR 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	Abbott, A. F. (*See* Nettleton, George, assignor.)			
35,205	Abell, W. T	Vernon, Iowa	Spinning wool, machinery for	May 13, 1862.
35,139	Absterdam, John	New York, N. Y	Journal boxes, bearings, &c., composition for forming	May 6, 1862.
36,132	Absterdam, John	New York, N. Y	Projectiles, composition for covering	Aug. 12, 1862.
36,976	Acker, Abram, assignor to J. S. Wanamaker & Co	Rampo, N. Y	Hinges, butt, spring	Nov. 18, 1862.
34,933	Ackerman, William	Flint, Mich	Trees and logs, machines for cutting	April 15, 1862.
35,497	Adair, James	Pittsburg, Pa	Stills, oil, condensers for	June 10, 1862.
	Adams, Charles, and Anthony S. Fleury. (*See* Fleury & Adams.)			
35,660	Adams, Henry F., and William Berry	Syracuse, N. Y	Lamp-burners, kerosene	June 24, 1862.
34,399	Adams, James C	Baltimore, Md	House, bridge, boat and wagon body, combined	Feb. 18, 1862.
35,286	Adams, John	Pittsburg, Pa	Vessels, preserve	May 20, 1862.
35,428	Adams, John Q	Highspire, Pa	Rakes, horse	June 3, 1862.
36,189	Adams, L. J., assignor to self and C. L. Pettee	Cleveland, Ohio	Water elevators	Aug. 12, 1862.
34,342	Adams, Nathaniel	Cornwall, N. Y	Carriages, running gear of	Feb. 11, 1862.
36,064	Adams, Samuel T	Medina, Ohio	Washing machine	Aug. 5, 1862.
35,576	Adams, William V	New York, N. Y	Shackles, or handcuffs	June 17, 1862.
37,209	Adt, John	Waterbury, Conn	Locks	Dec. 23, 1862.
36,328	Agate, John	Cuba, N. Y	Bags, machine for holding and filling	Sept. 2, 1862.
	Agnew, Angus, and Joseph White. (*See* White & Agnew.)			
35,498	Agnew, J. R	Mercersburg, Pa	Globes, school	June 10, 1862.
36,387	Agnew, John R	Mercersburg, Pa	Globes, school	Sept. 9, 1862.
37,140	Ainger, Abner C., and Samuel W. Webster, assignor to Samuel W. Webster.	Stockholm, N. Y	Cheese frames	Dec. 9, 1862.
36,265	Aitken, Walter	Newark, Ill	Water-wheel, current	Aug. 20, 1862.
36,266	Albertson, Albert	New York, N. Y	Bottle-stoppers	Aug. 26, 1862.
36,694	Alden, Bradford R	New York, N. Y	Lamp-burners	Oct. 21, 1862.
	Alden, Henry A., and Benj. F. Lee. (*See* Lee & Alden.)			
37,192	Alden, Henry A., assignor to New York Rubber Co	Fishkill, N. Y	Hose and flexible tubes, manufacture of	Dec. 16, 1862.
35,805	Alder, L. S	Cleona, Ind	Sawing down trees, machines for	July 8, 1862.
34,091	Alexander, Barton S	U. S. A	Projectile for rifled ordnance	Jan. 7, 1862.
34,045	Alexander, Charles	Washington, D. C	Candlestick, camp	Jan. 7, 1862.
34,343	Alexander, C. M	Washington, D. C	Bridle-bit attachments	Feb. 11, 1862.
36,329	Alger, Francis	Boston, Mass	Shells, explosive, fuze for	Sept. 2, 1862.
36,553	Alger, Francis	Boston, Mass	Shells, combined time and percussion fuze for	Sept. 30, 1862.
35,864	Allen, Anthony B	New York, N. Y	Corn-shellers	July 15, 1862.
36,133	Allen, Arandel P	Niagara, N. Y	Lubricator, railroad journal	Aug. 12, 1862.
35,196	Allen, Chester F., assignor to himself, C. B. Beebe, and H. Taylor.	Pawpaw, Mich	Bumper, car and draw-head springs	May 6, 1862.
36,884	Allen, Edwin	Newark, N. J	Forming and planing machines, movable bed for	Nov. 11, 1862.
1,268	Allen, Ethan	Worcester, Mass	Fire-arm, revolving (Reissue)	Feb. 4, 1862.
35,067	Allen, Ethan	Worcester, Mass	Fire-arm, revolving	April 29, 1862.
36,760	Allen, Ethan	Worcester, Mass	Rifles, back sight for	Oct. 28, 1862.
35,661	Allen, John, and Edward Pick	Brooklyn, N. Y	Ovens	June 24, 1862.
35,068	Allen, John F	New York, N. Y	Engines, steam	April 29, 1862.
35,069	Allen, John F	New York, N. Y	Engines, steam, slide-valves of	April 29, 1862.
35,070	Allen, John F	New York, N. Y	Engines, steam, link-motion for	April 29, 1862.
35,071	Allen, John F	New York, N. Y	Engines, steam, valve-gear for	April 29, 1862.
36,695	Allen, John F	New York, N. Y	Engines, steam, valve-gear of	Oct. 21, 1862.
	Allen, Norman, and Robert Chadwick. (*See* Chadwick & Allen.)			
	Allen, Sidney. (*See* French, Samuel, assignor.)			
36,048	Allen, William H., assignor to self and Otis Warren	Fryeburg, Me	Leaching tan-bark and obtaining extracts, apparatus for	July 29, 1862.
	Allison, William and S. M. (*See* Ekin, John, assignor.)			
	Allison, William. (*See* Ekin, John, assignor.)			
36,226	Alsop, C. R., assignor to J. W. Alsop	Middletown, Conn	Fire-arms, revolving	Jan. 21, 1862.
34,803	Alsop, C. R., assignor to J. W. Alsop	Middletown, Conn	Fire-arms, revolving	Mar. 5, 1862.
34,919	Alsop, Charles R., assignor to Joseph W. Alsop	Middletown, Conn	Primer, percussion cap	April 8, 1862.
37,193	Alsop, Charles R., assignor to Joseph W. Alsop	Middletown, Conn	Gun, smooth-bored, rifled muzzle for	Dec. 7, 1862.
36,498	Alsop, George M	Philadelphia, Pa	Air-springs	Sept. 23, 1862.
34,099	Althause, John J	New York, N. Y	Plastering surfaces	Jan. 7, 1862.
35,287	Alvord, John J	Tecumseh, Mich	Brick, machine for moulding and pressing	May 20, 1862.
34,855	Ambler, A. J., assignor to self, R. N. Ambler, and Warrick Martin.	Milwaukie, Wis	Cars, railroad, brake for	April 1, 1862.
35,408	Ambler, A. J., assignor to self, R. N. Ambler, and Warrick Martin.	Milwaukie, Wis	Car brakes, railroad	May 27, 1862.
35,647	Ambler, A. J., assignor to self, R. N. Ambler, and Warrick Martin.	Milwaukie, Wis	Car brakes, railroad	June 17, 1862.
35,727	Ambler, A. J., assignor to self, R. N. Ambler, and Warrick Martin.	Milwaukie, Wis	Car brakes, railroad	June 24, 1862.
36,382	Ambler, Augustine J., assignor to self, R. N. Ambler, and W. Martin.	Milwaukie, Wis	Car coupling	Sept. 2, 1862.
34,286	Ambler, Stephen F	Brooklyn, N. Y	Amalgamator	Feb. 4, 1862.
36,134	Ambler, Stephen F	Brooklyn, N. Y	Bread, aerated, manufacture of	Aug. 12, 1862.
	American Flask and Cap Co. (*See* Hicks, Chas., assign'r.)			
	American Knife Co. (*See* Cables, James H., assignor.)			
	American Steam Gas Co. (*See* Bassett, John A., assign'r.)			
34,225	Ames, Horace B	Brooklyn, N. Y	Skirts, hoop	Jan. 21, 1862.
34,227	Ames, Nathan, assignor to the Goodyear India-rubber Stopple Company.	Saugus Centre, Mass	Bottle stopples	Jan. 21, 1862.
35,055	Ames, Nathan, assignor to self and Nathaniel Evans, Jr	Saugus Centre, Mass	Printing press, card, self-feeding	April 22, 1862.
36,761	Amidon, Charles H	Greenfield, Mass	Wringing machine	Oct. 28, 1862.
34,085	Ammidon, John, assignor to self and L. Streeter	Springfield, Mass	Buckles, harness	Jan. 7, 1862.
34,233	Anderson, Thomas K	Hornellsville, N. Y	Composition of fuze or slow-match for igniting powder	Jan. 28, 1862.
34,389	Andres, Stephen R., and Sam'l and Macdonough Bucklin	Troy, N. Y	Food made of sweet potato, articles of	Feb. 11, 1862.
1,340	Andres, Stephen R	Troy, N. Y	Food made from beans, peas, &c., articles of (Reissue)	Sept. 9, 1862.
1,259	Andrews, Abraham, dec'd, by Mary Andrews, administratrix, and Harrison Kalbach.	Berwille, Pa	Water-wheels, horizontal (Reissue)	Jan. 14, 1862.
36,827	Andrews, Lambert	Plantsville, Conn	Traps, mole	Nov. 4, 1862.
36,630	Andrews, Luman, assignor to self and Phineas Stevens	DeKalb, Ill	Telegraph cables	Oct. 7, 1862.
34,187	Andrews, T. C	Leverington, Pa	Tobacco pipes	Jan. 21, 1862.
36,759	Andrews, T. C., and J. Shinn, assignors to T. Cecil Andrews	Leverington, Pa	Printing press, engraved plate	Oct. 21, 1862.
35,577	Andrews, William D	New York, N. Y	Pump, reciprocating	June 17, 1862.
36,885	Andrews, William D	New York, N. Y	Engines, steam, oscillating	Nov. 11, 1862.
37,030	Andrews, William D	New York, N. Y	Engines, steam	Dec. 2, 1862.
36,696	Andrews, W. W	Warrensville, Ohio	Boats, belay cleat for	Oct. 21, 1862.
34,234	Andriessen, Frederick	Alleghany City, Pa	Car truck regulator	Jan. 28, 1862.
36,595	Ansley, George W	Cleveland, Ohio	Skates	Oct. 7, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	Antagnini, Bernardo. (*See* Bolsset, Pierre, assignor.)			
	Antagnini, Bernardo. (*See* Bolsset, Pierre, assignor.)			
35, 288	Anthony, Sherman E	Stillwater, N. Y	Shingle machine	May 20, 1862.
	Appleton, Wm. H., John A., Dan'l S., and Sam'l F. (*See* North, Jno., assignor.)			
35, 662	Archer, George	Masillon, Ohio	Hounds and fifth-wheel, combined	June 24, 1862.
	Archer, G. W., and B. H. Smith. (*See* Smith & Archer.)			
	Archibald, Edward M. (*See* Paine, Henry M., assignor.)			
35, 409	Armstrong, F. W., assignor to self, S. G. Milligan, and J. S. Green, jr.	New York, N. Y	Journal boxes, composition for	May 27, 1862.
35, 914	Armstrong, James, jr	Elmira, Ill	Planters, corn	July 22, 1862.
37, 025	Armstrong, James W., and Jno. Taylor	Augusta, Ky	Fire-arms, breech-loading	Nov. 25, 1862.
34, 326	Armstrong, John, assignor to R. T. Kensil & Co	Philadelphia, Pa	Envelopes, pasted, apparatus for drying	Feb. 4, 1862.
36, 866	Arndt, E. G. F., and Augustus Kühne	Rondout, N. Y	Locks	Nov. 11, 1862.
36, 499	Arnold, Benjamin	East Greenwich, R. I	Nets, seine, machine for making	Sept. 23, 1862.
36, 887	Arnold, Joel	Elmira, N. Y	Stump machine	Nov. 11, 1862.
1, 517	Arnold, Stephen D., assignor to P. and F. Corbin	New Britain, Conn	Lift or handle	Nov. 11, 1862.
1, 624	Arnold, Stephen D., assignor to P. and F. Corbin	New Britain, Conn	Coffins, &c., lifting handle plate for (Design)	Jan. 21, 1862.
37, 067	Arthur, Wm. R., assignor to self and Laverett H. Clarke	Chicago, Ill	Railroad splices	Aug. 19, 1862.
	Ashcroft, Edward H. (*See* Seymour, James M., assignor.)			Dec. 2, 1862.
	Ashton, Charles A., and Samuel H. Hamilton. (*See* Hamilton & Ashton.)			
36, 634	Aspinwall, Lewis A	Ireland's Corners, N. Y	Planting potatoes, machines for	Oct. 14, 1862.
36, 762	Atkins, Charles M	Pottsville, Pa	Railroad cars, construction of	Oct. 28, 1862.
34, 608	Attemeder, Theodore, assignor to self and R. H. Gratz	Philadelphia, Pa	Telescopes for measuring distances	Mar. 4, 1862.
34, 345	Atterbury, J. S. and T. B., and James Reddick	Pittsburg, Pa	Glassware, hollow, manufacture of	Feb. 11, 1862.
34, 555	Atterbury, J. S., J. Reddick, and T. B. Atterbury	Pittsburg, Pa	Glassware, moulds for	Mar. 4, 1862.
35, 429	Atterbury, J. S., J. Reddick, and T. B. Atterbury	Pittsburg, Pa	Glassware, hollow, in bas relief, manufacture of	June 3, 1862.
35, 430	Atterbury, J. S., James Reddick, and T. B. Atterbury	Pittsburg, Pa	Glassware, hollow, manufacture of	June 3, 1862.
36, 592	Atwater, John B	Ripon, Wis	Guns, rifling of	Sept. 30, 1862.
36, 493	Atwood, Lewis J., assignor to Holmes, Booth & Hayden	Waterbury, Conn	Lamps	Sept. 16, 1862.
36, 985	Atwood, James E	Bucksport, Me	Engines, steam	Nov. 25, 1862.
37, 146	Atwood, James E	Washington, D. C	Knapsack collar	Dec. 16, 1862.
35, 806	Aubin, N	Albany, N. Y	Metres, fluid	July 8, 1862.
36, 201	Aubin, N	United States	Water-metres	Aug. 19, 1862.
36, 202	Austin, Charles G	Nantucket, Mass	Coal-sifters	Aug. 19, 1862.
35, 206	Averill, H. K., jr	Decorah, Iowa	Photographic plate holder	May 13, 1862.
35, 578	Avery, Stephen L	Norwich, N. Y	Water-elevators	June 17, 1862.
1, 320	Avery, Stephen L	Norwich, N. Y	Water-elevators (Reissue)	July 1, 1862.
36, 697	Ayer, D. M	Lewiston, Me	Looms, power, harness motion of	Oct. 21, 1862.
34, 726	Ayers, George W	Rahway, N. J	Ovens, portable	Mar. 18, 1862.
34, 472	Babbitt, Benjamin T	New York, N. Y	Ordnance, construction of	Feb. 25, 1862.
34, 046	Babbitt, Stephen I	Hackettstown, N. J	Washboard	Jan. 7, 1862.
36, 330	Babcock, William H	Homer, N. Y	Water-elevators	Sept. 2, 1862.
	Bacon, Thos. K., *et al.* (*See* Hopkins, Chas. W., assignor.)			
34, 473	Badger, N	Shelbyville, Ky	Digging machines	Feb. 25, 1862.
35, 915	Baer, J. K	Highland, Ill	Wines, domestic, manufacture of	July 22, 1862.
34, 474	Ball, Louis	New Haven, Conn	Light-houses, piers, &c., construction of foundations for	Feb. 25, 1862.
36, 635	Bailey, A. B	Middle Haddam, Conn	Coffin screws, caps for	Oct. 14, 1862.
	Bailey, A. J., and John Power. (*See* Power & Bailey.)			
34, 178	Bailey, Alfred M., and John O. Conch, assignors to the Metropolitan Washing Machine Company.	Middlefield, Conn	Clothes-wringers	Jan. 14, 1862.
36, 319	Bailey, Edwin, assignor to self and Henry McShane	Baltimore, Md	Hydrants, cut-offs for	Aug. 26, 1862.
35, 431	Bailey, George	Buffalo, N. Y	Check, baggage	June 3, 1862.
36, 763	Bailey, George	Buffalo, N. Y	Presses for stamping tickets	Oct. 28, 1862.
37, 031	Bailey, G. B	Greenfield, Ind	Grain-cleaners	Dec. 2, 1862.
34, 868	Bailey, Gilbert L	Portland, Me	Buckles	April 8, 1862.
34, 869	Bailey, Gilbert L	Portland, Me	Creeper, ice	April 8, 1862.
	Bailey, J. S., *et al.* (*See* Tuttle, Charles F., administrator of assignors.)			
35, 072	Bailey, S. A	New London, Conn	Wringing machine cylinders	April 29, 1862.
35, 663	Bailey, S. A	New London, Conn	Wringing machine, rollers for	June 24, 1862.
	Bailey, Stephen A., and Russell Wheeler. (*See* Wheeler & Bailey.)			
34, 870	Bailey, Timothy	Ballston Spa, N. Y	Washing machine	April 8, 1862.
37, 124	Baird, Joseph H., assignor to Jedediah Wilcox	Waterbury, Conn	Skirts, apparatus for applying clasps to	Dec. 9, 1862.
34, 188	Baird, Lewis	Cambridge, Mass	Boilers, steam, mode of preventing incrustation in	Jan. 21, 1862.
36, 331	Baker, A. C., and John Van Dyne	Hyde Park, N. Y	Car coupling	Sept. 2, 1862.
34, 287	Baker, Edward D	Claremont, N. H	Ordnance, construction of	Feb. 4, 1862.
36, 332	Baker, Josiah F	West Yarmouth, Mass	Bedsteads, invalid	Sept. 2, 1862.
	Baker, James E., and J. B. Bowen. (*See* Bowen & Baker.)			
	Baker, J. M., and C. G. Case. (*See* Case & Baker.)			
35, 661	Baker, James R	Kendallville, Ind	Lamps, mode of removing chimneys and filling	June 24, 1862.
	Baker, Joseph, and R. C. and J. P. Carr. (*See* Cummings, Daniel M., assignor.)			
34, 934	Baker, M. L	Munnsville, N. Y	Grain, machines for gathering and binding	April 15, 1862.
	Baker, Philo E., and Sam'l M. Logan. (*See* Logan & Baker.)			
35, 153	Baker, Seth W	Providence, R. I	Lapping, printers'	May 6, 1862.
36, 636	Baker, Zachariah	Erie, Ill	Tanning	Oct. 14, 1862.
	Balch, John H. (*See* Darby, Asa L., assignor.)			
34, 189	Balderston, John E	Philadelphia, Pa	Axles, splicing-bar for	Jan. 21, 1862.
34, 124	Baldwin, John, jr	Berea, Ohio	Grindstones, machines for making	Jan. 14, 1862.
34, 344	Baldwin, J. Lewis	Newark, N. J	Daguerreotype cases, moulds for making	Feb. 11, 1862.
34, 190	Baldwin, M. W	Philadelphia, Pa	Engine, rotary	Jan. 21, 1862.
35, 289	Baldwin, Sarah A	Waterbury, Conn	Sofa and bathing tub, combination of	May 20, 1862.
36, 388	Baldwin, Sarah A	Waterbury, Conn	Door-plates and card-receivers	Sept. 9, 1862.
36, 389	Ball, Cortland	Augusta, Mich	Hammers	Sept. 9, 1862.
34, 047	Ball, H. W	New York, N. Y	Table and camp chest	Jan. 7, 1862.
35, 347	Ball, Thomas C., assignor to self, D. M. Smith, and H. H. and A. C. Mason.	Springfield, Vt	Supporters, blind and shutter	May 20, 1862.
35, 663	Ballard, William	New York, N. Y	Ships, metallic defensive armor for	June 24, 1862.
36, 554	Ballard, William	Homer, N. Y	Drills, grain	Sept. 30, 1862.
34, 100	Balsley, John H	Dayton, Ohio	Ladder, step	Jan. 7, 1862.
35, 290	Bancroft, Charles E	Waterbury, Conn	Clothes-wringer	May 20, 1862.
	Bangs, James S. (*See* Waterman, L. B., assignor.)			
36, 500	Banks, Joseph	New York, N. Y	Pumps, rotary	Sept. 23, 1862.
35, 432	Barager, Charles F	Candor, N. Y	Plough, reversible	June 3, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
37,210	Barber, Hiram	Juneau, Wis	Bed-bottom	Dec. 23, 1862.
35,728	Barber, Ira S., assignor to self and Luther N. Fuller	New York, N. Y	Cigar machines	June 24, 1862.
37,082	Barcalo, J. B	Mt. Morris, N. Y	Separator, grain	Dec. 9, 1862.
	Barclay, George W., and R. V. De Guinon. (*See* De Guinon & Barclay.)			
36,637	Barclay, Robert	Buffalo, N. Y	Chronometer escapements	Oct. 14, 1862.
34,400	Barden, John S	New Haven, Conn	Engines, steam, crank and cross-head connexion for	Feb. 18, 1862.
36,698	Barden, John S	New Haven, Conn	Water metres	Oct. 21, 1862.
	Bardwell, C. A. and A. (*See* Ingraham, C. D., assignor.)			
34,728	Bare, Abraham	Mexico, Ohio	Saccharine juices, evaporators for	Mar. 25, 1862.
	Barkalow, W. V. (*See* Gault, John, assignor.)			
34,179	Barker, John W., and James P. Haskins	Syracuse, N. Y	Salt, common, purifying	Jan. 14, 1862.
36,898	Barker, Samuel G	Carbondale, Pa	Scale beams	Nov. 4, 1862.
37,123	Barker, William P., assignor to self, James Van Buren, and Nelson Burchard.	Grand Rapids, Mich	Grain-binders	Dec. 9, 1862.
35,357	Barlow, Samuel	Stake Hill, Middleton, England	Bleaching and cleansing textile fabrics, apparatus for	May 27, 1862.
35,404	Barlow, William A	Elkhorn, Wis	Stoves	June 3, 1862.
36,596	Barnard, W. B	Waterbury, Conn	Fastenings, window-blind	Oct. 7, 1862.
36,597	Barnard, W. B	Waterbury, Conn	Fastenings, blind and shutter	Oct. 7, 1862.
	Barnes, A. T., and A. W. Brinkerhoff. (*See* Brinkerhoff & Barnes.)			
	Barnes, Henry, and Andrew Sawyer. (*See* Sawyer & Barnes.)			
35,207	Barnes, H. A	Milwaukie, Wis	Cars, railroad, shackles for	May 13, 1862.
36,444	Barnes, Samuel	Rochester, Mich	Millers' stone-staff	Sept. 16, 1862.
35,197	Baron, Victor, assignor to self and William W. W. Wood	France	Ores, concentrating and cleaning	May 6, 1862.
36,935	Barr, Hugh	Independence, Iowa	Churns	Nov. 18, 1862.
35,208	Barrett, James J	Georgetown, D. C	Refrigerator	May 13, 1862.
34,390	Barron, Thomas J., assignor to James Horner	Brooklyn, N. Y	Lamps	Feb. 11, 1862.
1,563	Barstow, A. C	Providence, R. I	Stove, gas-burner (Design)	April 8, 1862.
1,600	Barstow, A. C	Providence, R. I	Stove, parlor (Design)	June 3, 1862.
	Barthel, Jacob, and Samuel Keeler. (*See* Keeler & Barthel.)			
	Barthel, Jacob, and Samuel Keeler. (*See* Keeler & Barthel.)			
34,288	Bartholomew, Frederick H	New York, N. Y	Valve-regulators	Feb. 4, 1862.
1,351	Bartholomew, Harry S	Bristol, Conn	Ball brace (Reissue)	Nov. 4, 1862.
36,066	Bartholow, Roberts	United States army	Cartridge, solid	Aug. 5, 1862.
34,101	Bartle, Warren S	Newark, N. Y	Pumps	Jan. 7, 1862.
34,807	Bartlett, Joseph W	New York, N. Y	Sewing machines, needle-gauge and adjuster for	April 1, 1862.
34,545	Bartlett, Stephen S., assignor to self and Thos. H. Dodge	Providence, R. I	Harvesters	Feb. 25, 1862.
	Bartlett, Stephen S., and John E. Brown. (*See* Brown & Bartlett. Reissue.)			
	Bartlett, Stephen S., and John E. Brown. (*See* Brown & Bartlett. Reissue.)			
	Bartlett, Stephen S., and John E. Brown. (*See* Brown & Bartlett. Reissue.)			

36,986	Bartlett, Stephen S	Providence, R. I	Spinning frames, bolsters for	Nov. 25, 1862.
34,871	Bartlett, W. D	Amesbury, Mass	Stoves, cooking	April 8, 1862.
34,556	Bartol, B. H	Philadelphia, Pa	Boilers, steam	Mar. 4, 1862.
	Barton, D. R. (*See* Crane, Samuel G., assignor.)			
36,436	Barton, Elijah, assignor to A. S. White and J. W. Barton	East Hampton, Conn	Bell, alarm, for doors	Sept. 9, 1862.
	Bascom, Oliver, and I. S. Hyatt. (*See* Hyatt, Isaiah S. and John W., assignors.)			
36,598	Bassett, Charles	Massillon, Ohio	Hoisting-cranes	Oct. 7, 1862.
34,935	Bassett, E. F	Seymour, Conn	Mattress	April 15, 1862.
34,557	Bassett, John A	Salem, Mass	Gas, apparatus for carburetting	Mar. 4, 1862.
35,807	Bassett, John A	Salem, Mass	Gases for illuminating and other purposes, manufacture of	July 8, 1862.
35,984	Bassett, John A	Salem, Mass	Gas, apparatus for carburetting	July 29, 1862.
36,254	Bassett, John A., assignor to the American Steam Gas Co	Salem, Mass	Gas, illuminating, manufacture of	Aug. 19, 1862.
	Bassett, R. M. (*See* Smith, Wilson H., assignor.)			
34,856	Bate, R. L., assignor to self and W. S. Wilcox	Adrian, Mich	Furnaces, air-heating	April 1, 1862.
36,987	Bates, James L	Providence, R. I	Engines, steam, packing for	Nov. 25, 1862.
36,063	Battey, William P., and William N. Taylor	Utica, N. Y	Gas retorts	Aug. 5, 1862.
35,863	Battin, Joseph	Newark, N. J	Steam generators	July 15, 1862.
1,265	Baudelot, Jean Louis, assignor to Henry Migeon	Walcottville, Conn	Beer and other liquids, process of cooling (Reissue)	Jan. 28, 1862.
1,266	Baudelot, Jean Louis, assignor to Henry Migeon	Walcottville, Conn	Beer and other liquids, apparatus for cooling (Reissue)	Jan. 28, 1862.
1,267	Baudelot, Jean Louis, assignor to Henry Migeon	Walcottville, Conn	Beer and other liquids, apparatus for cooling (Reissue)	Jan. 28, 1862.
35,358	Bauer, Peter	Newark, N. J	Skates	May 27, 1862.
35,985	Baumann, John N	Muscatine, Iowa	Cultivators	July 29, 1862.
34,620	Baxter, Charles F	Boston, Mass	Filters	Mar. 11, 1862.
35,008	Bayley, Oliver W	Somerville, Mass	Fire-arms, breech-loading	April 22, 1862.
1,321	Baylis, James R	Baltimore, Md	Propellers, marine, double cone (Reissue)	July 1, 1862.
	Beach, Alfred E. (*See* Lawrence, D. Clinton, assignor.)			
36,553	Beach, Charles, assignor to self and S. C. Cleveland	Penn Yan, N. Y	Hemp and flax for carding, machinery for preparing	Sept. 23, 1862.
35,916	Beach, Henry H	Philadelphia, Pa	Grain, device for spreading	July 22, 1862.
35,986	Beach, Moses S	Brooklyn, N. Y	Stereotype plates	July 29, 1862.
36,749	Beach, Volney R., and Jube Day, assignors to themselves and Charles L. Patrick.	Independence, Iowa	Sugar evaporator	Oct. 22, 1862.
35,743	Bean, B. F	Schuylkill, Pa	Wagon standards	July 1, 1862.
36,067	Beanes, Edward	Havana, Cuba	Sugar, manufacture and refining of	Aug. 5, 1862.
36,988	Beanes, Edward	Havana, Cuba	Sugar, refining and manufacture of	Nov. 25, 1862.
35,291	Beardsley, Levi A	South Edmeston, N. Y	Hop frames	May 20, 1862.
	Beatty, A. W., and R. H. Blair. (*See* Blair & Beatty.)			
35,666	Beck, James	New York, N. Y	Skirt clasps, pliers for closing	June 24, 1862.
	Beck, William. (*See* Valentine & Ridout, assignors.)			
36,445	Beckers, Alexander	Hoboken, N. J	Steering apparatus	Sept. 16, 1862.
36,936	Beckers, Alexander	Hoboken, N. J	Steering apparatus	Nov. 18, 1862.
36,699	Beckman, Horatio B	Newburyport, Mass	Engines, steam, automatic stop-motion for	Oct. 21, 1862.
	Beckwith, P. D., and Jno. S. Gage. (*See* Gage & Beckwith.)			
	Bedwell, Thos. J. (*See* Gird, Edward D., and R. Gird, assignors.)			
36,639	Beebe, A. M	West Bloomfield, N. Y	Whiffletrees	Oct. 14, 1862.
	Beebe, C. B., *et al.* (*See* Allen, Chester F., assignor.)			
36,700	Beebe, Luther A	Chicago, Ill	Corn, machines for shelling and cleaning	Oct. 21, 1862.
35,073	Beecher, L. Wheeler	New Haven, Conn	Fruit basket	April 29, 1862.
36,135	Beeman, E	Oswego, N. Y	Drill, hand	Aug. 12, 1862.
34,475	Beers, John L	Fayette township, Pa	Water-wheels	Feb. 25, 1862.
34,808	Bejin, Henry	New York, N. Y	Wood, kindling, machine for splitting	April 1, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35, 579	Behn, Henry	New York, N. Y	Lamp, coal-oil	June 17, 1862.
	Behr, Adolph, and Bethuel and Nathaniel Shepard Keith. (*See* Keith, Behr & Keith.)			
34, 191	Beidler, Charles	Allentown, Pa	Ploughs	Jan. 21, 1862.
	Beierlein, Henry, and William Keubler. (*See* Keubler & Beierlein.)			
	Bell, E. D. (*See* Scofield, L. S., assignor.)			
	Bell, R. J., and Wm. Gibb. (*See* Gibb & Bell.)			
	Bell, Wm. J., and R. Van Ormer. (*See* Van Ormer & Bell.)			
36, 446	Bement, Edwin	Fostoria, Ohio	Plough beams	Sept. 16, 1862.
36, 447	Bement, Edwin	Fostoria, Ohio	Plough points	Sept. 16, 1862.
35, 433	Bement, William B	Philadelphia, Pa	Stands for machines	June 3, 1862.
34, 192	Benas, Magnus	New York, N. Y	Tanning composition	Jan. 21, 1862.
	Bender, Ephraim H. (*See* Perry, Philander, assignor.)			
36, 267	Bender, Richard W	Chicago, Ill	Evaporating by means of steam, apparatus for	Aug. 26, 1862.
37, 211	Benedict, E. U	Chicago, Ill	Roofs, metallic and wooden	Dec. 23, 1862.
36, 049	Benfield, E. M., assignor to Benfield & Dawdy	Maquin, Ill	Hedges, machines for trimming	July 29, 1862.
34, 900	Bennett, David	Stratford, Conn	Shoe, ice or calk	April 1, 1862.
	Bennett, English, Frisbee, and Crawford. (*See* Crawford, Benjamin, assignor.)			
34, 460	Bennett, Erastus S., assignor to self, James Thoubborou, and Lydia Brown.	Brooklyn, N. Y	Locks	Feb. 18, 1862.
	Bennett, Geo. W. (*See* Reay, George H., assignor.)			
34, 346	Bentz, Samuel	Carroll county, Md	Hulling machine	Feb. 11, 1862.
34, 729	Berg, Henry	Davenport, Iowa	Fire-arm, breech-loading	Mar. 25, 1862.
35, 134	Bergen, Cornelius	Covert, N. Y	Separators, grain	May 6, 1862.
36, 268	Bergstresser, Edwin L	Berrysburg, Pa	Rakes, horse	Aug. 26, 1862.
1, 601	Bering, Thomas G	Philadelphia, Pa	Fence (Design)	June 3, 1862.
37, 147	Berlin, P. J	Blairsville, Pa	Mills, cider	Dec. 16, 1862.
35, 659	Berney, Alfred	Jersey City, N. J	Shrapnell and other similar projectiles, composition for filling.	June 17, 1862.
36, 934	Berney, Alfred	Jersey City, N. J	Shell, liquid fire, or projectile	Nov. 11, 1862.
	Bernstein, Samuel. (*See* Carter, Wm., assignor.)			
	Berry, Wm., and Henry F. Adams. (*See* Adams & Berry.)			
36, 937	Berthoud, Joseph	Paris, France	Advertising, pancramic, apparatus for	Nov. 11, 1862.
35, 987	Bertol, Joseph A	New York, N. Y	Amalgamator for collecting gold and silver	July 29, 1862.
35, 917	Bertrand, George P	Easton, Pa	Mirror for attachment to a window, &c	July 22, 1862.
36, 750	Besley, Charles, assignor to Edward Hecksher	Paris, France	Electro-plating iron, steel, &c., process of	Oct. 21, 1862.
1, 298	Bevin, Abner G	Chatham, Conn	Sleigh bells to straps, mode of attaching (Reissue)	April 8, 1862.
	Bickel, Jno. G., and Jacob Jaharus. (*See* Jaharus & Bickel.)			
36, 639	Bickel, William	Pottsville, Pa	Stoves	Oct. 14, 1862.
35, 580	Bickford, Ebenezer	Ogden, N. Y	Smoking meats, apparatus for	June 17, 1862.
35, 581	Bickhart, Jacob	Harlan, Ind	Fences, portable	June 17, 1862.
37, 083	Bickhart, Jacob	Harlan, Ind	Gates	Dec. 9, 1862.
36, 501	Bidwell, George C	Philadelphia, Pa	Boilers	Sept. 23, 1862.

35, 599	Biebuyck, H	Brussels, Belgium	Powder, blasting	Oct. 7, 1862.
	Billing, Frederick W. (*See* Schulze, Paul, assignor.)			
36, 448	Billinghurst, Wm., and J. Requa	Rochester, N. Y	Battery, platoon	Sept. 16, 1862.
36, 888	Billings, G. W	St. Paul, Minn	Pump, forcing, rotary	Nov. 11, 1862.
36, 390	Billings, Uriah	New Bedford, Mass	Horseshoes, machines for making	Sept. 9, 1862.
36, 269	Binns, Amos J	Goshen township, Ohio	Churns	Aug. 26, 1862.
34, 289	Birch, Thomas L., and John C. Noble	Washington, Pa	Car couplings	Feb. 4, 1862.
36, 879	Bird, J. N., assignor to Horace H. Day	Trenton, N. J	Projectiles, India-rubber wad for	Nov. 4, 1862.
1, 299	Birdsell, John C	West Henrietta, N. Y	Hulling and threshing clover, machinery for (Reissue)	April 8, 1862.
35, 209	Birdsell, John C	West Henrietta, N. Y	Threshing clover and hulling and cleaning the seed	May 13, 1862.
34, 621	Birkholz, Alexander	Hartford, Conn	Composition metal of iron, zinc, and copper	Mar. 11, 1862.
34, 872	Bisbee, Ira, and Arza Bisbee	East Pharsalia, N. Y	Press, hay	April 8, 1862.
35, 210	Bishop, Martin	Washington, D. C	Fuel box and washing apparatus with settees, combination of.	May 13, 1862.
35, 359	Black, Andrew	New York, N. Y	Candles, mould, machine for making	May 27, 1862.
36, 889	Black, A. M	Auburn, Ill	Cultivators	Nov. 11, 1862.
36, 203	Black, J. F., and Ambrose Burnsker	Lancaster, Ill	Pumps, cattle	Aug. 19, 1862.
	Blacker, Wm. Hooper. (*See* Walcott, Jabes E., assignor.)			
	Blackham, Job W., *et al.* (*See* Hendrickson, Ezekiel M., assignor.)			
36, 631	Blackman, Edwin, assignor to self and James S. Taylor	Danbury, Conn	Weighing carts, self	Oct. 7, 1862.
34, 048	Blackman, S. G	Waterbury, Conn	Lamps	Jan. 7, 1862.
34, 558	Blair, R. H., and A. W. Beatty	Saltsburg, Pa	Rakes, horse	Mar. 4, 1862.
35, 988	Blake, Amos S	Waterbury, Conn	Doors and gates, weight and lever attachment for	July 29, 1862.
35, 866	Blake, S. E	Pittsburg, Pa	Lamp chimneys	July 15, 1862.
34, 857	Blake, George F., assignor to self and Peter Hubbell	Medford, Mass	Water-metres	April 1, 1862.
36, 270	Blake, George W	New York, N. Y	Boilers, steam, self-regulating apparatus for feeding	Aug. 26, 1862.
36, 391	Blake, James P	Waterbury, Conn	Needles, sewing-machine, making	Sept. 9, 1862.
36, 392	Blake, James P	Waterbury, Conn	Needles, sewing-machine, machinery for making	Sept. 9, 1862.
34, 559	Blake, Joseph M	Madison, Wis	Horse-powers	Mar. 4, 1862.
	Blake, Rob't, and Lysander Button. (*See* Button & Blake.)			
	Blake, Samuel P. (*See* Haskins, John, assignor.)			
35, 667	Blake, Solomon E	Worcester, Mass	Sewing machines, folding and tucking gauges for	June 24, 1862.
37, 068	Blakeslee, Edward C., assignor to Holmes, Booth & Hayden	Waterbury, Conn	Lamps	Dec. 2, 1862.
34, 193	Blanchard, Thomas	Boston, Mass	Shovel scoop	Jan. 21, 1862.
1, 284	Bleecker, Theophylact B., assignor to the New York Wire Railing Company.	New York, N. Y	Bedsteads, folding (Reissue)	Mar. 4, 1862.
	Blight, Joseph, *et al.* (*See* Uren, Dunstone & Blight.)			
34, 125	Bliss, Alfred	New York, N. Y	Lamps	Jan. 14, 1862.
37, 212	Bliss, Alfred	New Rochelle, N. Y	Lamp insulators	Dec. 23, 1862.
34, 476	Bliss, William H	Newport, R. I	Hose coupling	Feb. 25, 1862.
	Bliss, William P. (*See* Cunningham, R. H., assignor.)			
36, 271	Blogett, Sumner	Glover, Vt	Wringing machine	Aug. 26, 1862.
36, 502	Blood, Samuel	Manchester, N. H	Spinning fliers	Sept. 23, 1862.
35, 211	Bloodgood, John H	New York, N. Y	Wool, machinery for drawing and spinning	May 13, 1862.
36, 890	Bloomfield, J. H	Chicago, Ill	Caster, furniture	Nov. 11, 1862.
	Bly, Douglas	Rochester, N. Y	Legs, artificial (Disclaimer)	Oct. 27, 1862.
1, 367	Bly, Douglas	Rochester, N. Y	Legs, artificial (Reissue)	Dec. 23, 1862.
35, 867	Boardman, Harris	Lancaster, Pa	Cork-cutting machines	July 15, 1862.
1, 612	Boch, William	Newtown, N. Y	Fire-work, hand frame for (Design)	July 8, 1862.
	Bodley & Lane. (*See* Smith, Samuel R., assignor.)			
36, 600	Boeckh, Charles	Strasburg, France	Lamp chimneys, cleaner for	Oct. 7, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	Boehner, Matthew E. (*See* Seavery, John E., assignor.)			
36,449	Boekel, William	Philadelphia, Pa	Projectiles, application of soft-metal packing to	Sept. 16, 1862.
36,829	Boekler, R., and G. W. Schramm	Brooklyn, N. Y	Hammers	Nov. 4, 1862.
	Bogardus, James	New York, N. Y	Horse-power, sun and planet (Extension)	Aug. 27, 1862.
35,583	Bogel, Henry	Watertown, Wis	Vehicle, velocipede	June 17, 1862.
35,292	Bogis, Matthew C	Philadelphia, Pa	Sword handles, India-rubber	May 20, 1862.
35,056	Boisset, Pierre, assignor to self and Bernardo Antagnini	Paris, France	Boots and shoes, India-rubber heels of	April 22, 1862.
35,057	Boisset, Pierre, assignor to self and Bernardo Antagnini	Paris, France	Boots and shoes	April 22, 1862.
	Boley, John. (*See* Perry, Eli, assignor.)			
34,560	Bondy, Joseph	New York, N. Y	Knapsacks	Mar. 4, 1862.
34,049	Bonham, G. W	Henry, Ill	Pulverizer and seed-sower	Jan. 7, 1862.
36,555	Bonham, John L	Hellen, Pa	Ordnance, revolving	Sept. 30, 1862.
36,764	Bouk, Nelson C	Clinton, Iowa	Rafting logs and timber, mode of	Oct. 28, 1862.
35,808	Boorn, Samuel	Lowell, Mass	Shuttle-boxes, cushions for	July 8, 1862.
35,918	Boorn, Samuel	Lowell, Mass	Looms	July 22, 1862.
	Booth, Holmes & Hayden. (*See* Atwood, Lewis J., ass'r.)			
	Booth, Holmes & Hayden. (*See* Blakeslee, Edw'd C., ass'r.)			
36,830	Booth, J. L	Rochester, N. Y	Separators, grain	Nov. 4, 1862.
1,354	Booth, Jonathan L	Rochester, N. Y	Separators, grain (Reissue)	Nov. 18, 1862.
36,383	Boothby, Putnum S., assignor to Joseph W. Brooks and Warren Soule.	Biddeford, Me	Boots, gaiter, fastening for	Sept. 2, 1862.
1,306	Borden, Gail, jr	Amenia, N. Y	Milk, sweet, concentrating and preserving (Reissue)	May 13, 1862.
35,919	Borden, Gail, jr	Amenia, N. Y	Cider and other juices of fruits, concentrating and preserving for use.	July 22, 1862.
36,891	Bostwick, Seymour, and Charles G. Sargent	Graniteville, Mass	Fire-arms, breech-loading	Nov. 11, 1862.
35,868	Bonbilla, Jean Remy	Paris, France	Locks, seal, for mails, &c	July 15, 1862.
	Bourgoise, J. B., and J. P. A. Havard. (*See* Havard & Bourgoise.)			
36,831	Bourn, William	Geneva, N. Y	Bootjack	Nov. 4, 1862.
36,068	Bourne, Edward and John	Pittsburg, Pa	Radiators	Aug. 5, 1862.
	Bouton, N. S. (*See* Newhouse, Henry, assignor.)			
35,559	Bowen, Andrew J., assignor to self and Levi K. Bowen	Baltimore, Md	Tobacco pipes	June 10, 1862.
35,009	Bowen, J. B., and J. E. Baker	Madison, Wis	Harvesters	April 22, 1862.
	Bowie, James A., and Chas. Carr. (*See* Goodyear, Robert B., assignor. Reissue.)			
	Bowker, S. H. (*See* Holden, Cyrus B., assignor.)			
	Boyce, C. B., & Co. (*See* Clement, Daniel B., assignor.)			
	Boyce, C. B., & Co. (*See* Squires, Sidney, assignor.)			
34,667	Boyce, Ellen B	Green Point, N. Y	Washing machine	Mar. 18, 1862.
	Boyd, John E. (*See* Bulkley, Charles S., assignor.)			
35,074	Boyden, Pardon	Sandy Creek, N. Y	Ploughs, snow, for railroads	April 29, 1862.
34,802	Boyers, William, assignor to John L. Livingston and John B. Shaffer.	Mount Carroll, Ill	Clothes-dryer, rotating	Mar. 25, 1862.
37,213	Boyle, James E., assignor to George Stevenson	Brooklyn, N. Y	Water-closets, valves for	Dec. 23, 1862.
35,800	Boynton, G. R., assignor to G. G. Pope and E. F. Slocum	Chicago, Ill	Lanterns	July 1, 1862.

36,989	Boynton, N. A	New York, N. Y	Heaters	Nov. 25, 1862.
34,936	Boynton, William, jr	Auburn, N. Y	Churns	April 15, 1862.
35,499	Bradford, Albert Green	Freeport, Ill	Pumps, chain	June 10, 1862.
35,801	Bradford, John S., assignor to Joseph C. Manning	Baltimore, Md	Lamps, coal-oil, burners for	July 1, 1862.
36,640	Bradford, Lewis G	Plymouth, Mass	Leathering tacks, apparatus for	Oct. 14, 1862.
34,235	Bradley, C. H	Westchester, Pa	Fire-arms, muzzle of, for cutting off cartridges	Jan. 28, 1862.
	Bradley, David, *et al.* (*See* Furst, Bradley & Lacey.)			
34,937	Bradley, James R	Ironton, Ohio	Iron, cast, into wrought iron and steel, converting	April 15, 1862.
36,936	Bradt, Joseph	Laporte, Ind	Bee-hives	Nov. 18, 1862.
35,744	Brady, Christian H	Mount Joy, Pa	Casting ploughshares, moulds for	July 1, 1862.
34,126	Brady, Freeman, jr., and John C. Noble	Washington, Pa	Gun, magazine	Jan. 14, 1862.
36,503	Brady, O. G	New York, N. Y	Skates	Sept. 23, 1862.
36,504	Brahn, John M	Red Bank, N. J	Tires, machine for upsetting	Sept. 23, 1862.
34,609	Brainerd, Jehu, assignor to Brainerd & Burridge	Cleveland, Ohio	Tanning	Mar. 4, 1862.
34,873	Brainerd, Jehu, and W. H. Burridge	Cleveland, Ohio	Process of extracting the strength of bark for tanning and other purposes.	April 8, 1862.
35,293	Brainerd, Jehu	Cleveland, Ohio	Skins, depilating and bating	May 20, 1862.
34,236	Brainerd, O. N	Marion, Pa	Saccharine liquids, evaporating pans for	Jan. 28, 1862.
35,989	Brand, Christopher C	Norwich, Conn	Fire-arms	July 29, 1862.
36,505	Brand, C. C	Norwich, Conn	Fire-arms, revolving	Sept. 23, 1862.
35,500	Brann, S. R	Hillsboro', Ill	Dampers	June 10, 1862.
	Bray, E. P., and Jos. Merian. (*See* Jenkinson, Jas., ass'r.)			
	Brayley, Jas., and John B. Pitts. (*See* Gordon, Alex'r, ass'r.)			
34,810	Brear, Abel	Saugatuck, Conn	Water by steam, device for raising	April 1, 1862.
34,811	Brear, Abel	Saugatuck, Conn	Sugar kettles and other vessels, mode of discharging the contents of.	April 1, 1862.
35,007	Brear, Abel	Saugatuck, Conn	Kettles and other vessels, apparatus for discharging liquids from.	April 15, 1862.
36,939	Brear, Abel	Saugatuck, Conn	Water, apparatus for raising and forcing	Nov. 18, 1862.
36,685	Brecht, Theodore, and S. B. Sigesmond, assignors to themselves, John Kulinski, Xavier Karcheski, and Alexander Wolowski.	Washington, D. C	Cloak, tent, bed, &c., combined	Oct. 14, 1862.
36,069	Brent, Theodore R	Muscatine, Iowa	Planters, corn	Aug. 5, 1862.
	Bridgeman, Erastus C., *et al.* (*See* Wilcox, John W., ass'r.)			
	Bridges, Albert, *et al.* (*See* Woodworth, Arad, assignor.)			
36,050	Bridges, Albert, assignor to self and Alfred Bridges	New York, N. Y	Car springs, railroad	July 29, 1862.
35,410	Bridges, Alfred, assignor to self and Albert Bridges	Newton, Mass	Car trucks	May 27, 1862.
34,127	Bridges, William C	Philadelphia, Pa	Telegraphs, optical	Jan. 14, 1862.
34,812	Briggs, Henry P	Brookfield, Conn	Washing machine	April 1, 1862.
36,751	Briggs, John, assignor to self and J. J. Hair	Louisville, Ky	Presses, tobacco	Oct. 21, 1862.
34,477	Briggs, John Smith	South Bend, Ind	Cars, street, mode of starting	Feb. 25, 1862.
34,938	Briggs, Joseph W	Cleveland, Ohio	Stitching machine	April 15, 1862.
	Briggs, Robert, and Joseph Nason. (*See* Nason & Briggs.)			
35,294	Briggs, Samuel A	Providence, R. I	Heaters	May 20, 1862.
	Brightman, J. W., and N. W. Taylor. (*See* Taylor & Brightman.)			
36,333	Brinkerhoff, A. W	Upper Sandusky, Ohio	Corn, device for husking	Sept. 2, 1862.
36,334	Brinkerhoff, A. W., and A. T. Barnes	Upper Sandusky, Ohio	Fruit-gatherers	Sept. 2, 1862.
36,335	Brinkerhoff, A. W	Upper Sandusky, Ohio	Planters, corn	Sept. 2, 1862.
36,336	Brinkerhoff, A. W., and A. J. Fallor	Upper Sandusky, Ohio	Field-rollers	Sept. 2, 1862.
37,214	Brinkerhoff, Jacob	Auburn, N. Y	Churns	Dec. 23, 1862.
36,136	Brinly, Thomas E. C., and J. G. Dodge	Louisville, Ky	Ploughs	Aug. 12, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35, 920	Brinton, Joseph H	West Chester, Pa	Sowing grain, &c., broadcast, hoppers of machines for	July 22, 1862.
35, 212	Brison, Claude	Chalons, France	Furnaces for retorts, stills, &c	May 13, 1862.
34, 730	Bristol, Richard C	Chicago, Ill	Ordnance, breech-loading	Mar. 25, 1862.
35, 434	Broadwell, W. B	Springfield, Ill	Ploughs, corn	June 3, 1862.
35, 010	Brockett, Charles P	New Haven, Conn	Lamp-burners	April 22, 1862.
	Bromley, P. M. (*See* Metz, Elisha, assignor.)			
36, 337	Bromwich, C. M	Boston, Mass	Lamp boxes, draught attachment for	Sept. 2, 1862.
	Bronson, E. A. (*See* Easterbrook & Wood, assignors.)			
36, 272	Brooks, Adeline J	Philadelphia, Pa	Corsets	Aug. 26, 1862.
35, 360	Brooks, Gilbert, and Wm. Ogden, assignors to themselves and Wm. and C. C. Brooks.	Waverly, N. Y	Sleeves, grain	May 27, 1862.
34, 194	Brooks, James F	Stafford Springs, Conn	Road-scrapers	Jan. 21, 1862.
34, 217	Brooks, John S	Rochester, N. Y	Heaters, sad-iron	Jan. 28, 1862.
36, 980	Brooks, John S	Rochester, N. Y	Heaters, sad-iron	Nov. 25, 1862.
37, 215	Brooks, John S	Rochester, N. Y	Elevator bucket	Dec. 23, 1862.
	Brooks, Jos. W., and Warren Soule. (*See* Boothby, Putnum S., assignor.)			
	Brosius, J., *et al.* (*See* Geiss, Brosius & Penn.)			
	Brosius, Jacob, *et al.* (*See* Penn, Geiss & Brosius.)			
36, 832	Brown, Adolph and Felix	New York, N. Y	Friction, coupling	Nov. 4, 1862.
34, 731	Brown, Albert	Troy, N. Y	Grates, stove	Mar. 25, 1862.
35, 075	Brown, Albert	Millinville, Pa	Flour-packing machine	April 29, 1862.
36, 273	Brown, Charles F	Warren, R. I	Ordnance, mounting	Aug. 26, 1862.
35, 584	Brown, Charles H	Fitchburg, Mass	Boilers, steam, feed regulators for	June 17, 1862.
35, 058	Brown, Charles S., assignor to self and John H. Kennedy	Homer, N. Y	Sawing machines, portable	April 22, 1862.
35, 745	Brown, D. C	New York, N. Y	Vehicles, running gear of	July 1, 1862.
34, 086	Brown, Edward, assignor to John W. Piper, assignor to B. D. Godfrey.	South Reading, Mass	Boots and shoes	Jan. 7, 1862.
34, 939	Brown, Edwin R	Chicago, Ill	Ticket recorders	April 15, 1862.
35, 076	Brown, Francis A	Ithaca, N. Y	Railroad chairs	April 29, 1862.
34, 732	Brown, Franklin E	Hightstown, N. J	Cultivators	Mar. 25, 1862.
36, 940	Brown, Franklin H	Chicago, Ill	Gas regulators	Nov. 18, 1862.
34, 733	Brown, Harvey	New York, N. Y	Lamps, chimneys for	Mar. 25, 1862.
	Brown, Henry, and Garretson Smith. (*See* Smith & Brown.)			
	Brown, Henry, and Garretson Smith. (*See* Smith & Brown.)			
35, 501	Brown, Hiram L. and Calvin P	Shortsville, N. Y	Drills, grain	June 10, 1862.
34, 874	Brown, J. N	New York, N. Y	Sleds, boys'	April 8, 1862.
35, 295	Brown, J. S., assignor to self and Joseph Kent	Washington, D. C	Water elevators	May 20, 1862.
36, 393	Brown, J. S	Washington, D. C	Letters, addressing	Sept. 9, 1862
36, 450	Brown, Job	Lawn Ridge, Ill	Swine from rooting, device for preventing	Sept. 16, 1862.
1, 981	Brown, Jno. E., and Stephen S. Bartlett, assignors to themselves and Thomas H. Dodge.	Woonsocket, R. I	Harvesters, grain and grass (Reissue)	Feb. 25, 1862.
1, 982	Brown, Jno. E., and Stephen S. Bartlett, assignors to themselves and Thomas H. Dodge.	Woonsocket, R. I	Harvesters, grain and grass (Reissue)	Feb. 25, 1862.
1, 983	Brown, Jno. E., and Stephen S. Bartlett, assignors to themselves and Thomas H. Dodge.	Woonsocket, R. I	Harvesters, grain and grass (Reissue)	Feb. 25, 1862.
34, 940	Brown, John W	New York, N. Y	Letter-box	April 15, 1862.
35, 967	Brown, Joseph M., assignor to self and Daniel McLaren	Cincinnati, Ohio	Car-brakes	July 22, 1862.
	Brown, Lydia, *et al.* (*See* Bennett, Erastus S., assignor.)			
35, 502	Brown, Nicholas T	Ononwa, Iowa	Rakes, horse	June 10, 1862.
36, 891	Brown, Orren L	Boston, Mass	Types, machines for setting up	Nov. 25, 1862.
	Brown, R. W., and John Taylor. (*See* Taylor & Brown.)			
35, 913	Brown, Silas H	Troy, N. Y	Hydrant	May 13, 1862.
35, 296	Brown, William	Petersburg, Pa	Washing machine	May 20, 1862.
34, 561	Brown, William H	Worcester, Mass	Fire-arms, breech-loading	Mar. 4, 1862.
34, 458	Browne, J. W., assignor to Jacob Mott Van Wagner	New York, N. Y	Moulding, weather strip	Feb. 18, 1862.
35, 503	Browne, W. E	Valley Falls, R. I	Projectiles, explosive, for ordnance	June 10, 1862.
34, 734	Brownell, C. E	East Haddam, Conn	Cards, machine, cylinders for	Mar. 25, 1862.
34, 735	Brownell, E. P	East Haddam, Conn	Crank motion	Mar. 25, 1862.
34, 102	Bruce, George H	Lancaster, N. Y	Bridges	Jan. 7, 1862.
36, 506	Bruce, John	Brooklyn, N. Y	Motive power	Sept. 23, 1862.
36, 549	Bryant, James W., assignor to Lewis A. Osborn	Welaka, Fla	Caps	Sept. 23, 1862.
34, 875	Bryson, Robert	Schenectady, N. Y	Harvesters, rakes for	April 8, 1862.
36, 941	Buchanan, Alexander	New York, N. Y	Valve, slide, for steam-engines	Nov. 18, 1862.
36 556	Buchanan, Andrew	Jersey City, N. J	Valves for steam-engines	Sept. 30, 1862.
	Buchanan, Coe S. (*See* Coupier & Mellier, ass'rs. Reissue.)			
	Buck, Alfred. (*See* Peters, William, assignor.)			
	Buck, Alfred. (*See* Peters, William, assignor.)			
	Buck, Alfred. (*See* Peters, William, assignor.)			
	Buck, Jerome. (*See* Martin, Benjamin Green, assignor.)			
34, 391	Buckland, Wm. Henry, assignor to Emery Rider	Glamorgan, Great Britain	Preparing peat, mode of	Feb. 11, 1862.
	Bucklin, Mackdonough, and Stephen R. and Samuel Andres. (*See* Andres & Bucklin.)			
	Bucklin, S. S. (*See* Marshall, Moses, assignor.)			
	Bucklin, S. S. (*See* Marshall, Moses, assignor.)			
34, 736	Buckman, E. and A	East Greenbush, N. Y	Knife, fork, and spoon cleaning machine	Mar. 25, 1862.
	Buckman, F. (*See* Spears, Charles D., assignor.)			
35, 585	Buckwalter, A. H. and J. H	Kimberton, Pa	Brick machines	June 17, 1862.
	Budd, B. L., and R. O. Doremus. (*See* Doremus & Budd.)			
	Budd, B. L., and R. O. Doremus. (*See* Doremus & Budd.)			
	Budd, Bern L., and R. Ogden Doremus. (*See* Doremus & Budd.)			
34, 806	Budd, Bern L	New York, N. Y	Cartridges, shot	Mar. 25, 1862.
36, 077	Budd, James	Sandy Hill, N. Y	Pumps	April 29, 1862.
35, 411	Buckley, Charles S., assignor to self and John E. Boyd	New York, N. Y	Balls	May 27, 1862.
34, 195	Bullard, John	Stockbridge, Vt	Distilling coal-oils, apparatus for	Jan. 21, 1862.
36, 765	Bunn, Lewis D	Morristown, N. J	Corpse-preserver	Oct. 28, 1862.
	Burnacker, Ambrose, and J. F. Black. (*See* Black & Burnacker.)			
34, 196	Burchard, Alfred	Sylvan township, Mich	Cutters or sleighs, iron	Jan. 21, 1862.
	Burchard, Nelson, *et al.* (*See* Barker, Wm. P., assignor.)			
35, 746	Burden, Henry	Troy, N. Y	Horseshoes, machines for making	July 1, 1862.
35, 921	Burdick, A. R., and C. D. Read	Racine, Wis	Harvesters, corn	July 22, 1862.
34, 401	Burgess, Charles H., 2d	Sandwich, Mass	Furnaces, reverberatory and other, doors for	Feb. 18, 1862.
34, 813	Burgess, Thomas H	Boston, Mass	Sewing-work cases, portable	April 1, 1862.
35, 011	Burgyes, William	Chelsea, Mass	Hats, sweat bands for	April 22, 1862.
34, 941	Burk, Hiram	Mineral Point, Ohio	Drills, mining	April 15, 1862.
	Burke, Edmund. (*See* Leach, George, assignor.)			

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35,853	Burleigh, Charles, assignor to Putnam Machine Co	Fitchburg, Mass	Pulley, friction	July 8, 1862.
36,338	Burlew, Hiram	Lock Haven, Pa	Pavements, concrete, composition for	Sept. 2, 1862.
35,990	Burlingame, Ezra D	Tecumseh, Mich	Threshing machines	July 29, 1862.
35,991	Burlingame, M. E	Willett, N. Y	Fetters, animal	July 29, 1862.
	Burlingame, R. P., and C. Robbins. (*See* Robbins & Burlingame.)			
	Burnet, S. S., and Dan. M. Harris. (*See* Harris & Burnet.)			
34,050	Burnett, P. W	Sacramento, Cal	Railroad switch	Jan. 7, 1862.
34,103	Burnett, William	Boston, Mass	Stocks, gun	Jan. 7, 1862.
35,869	Burnham, Nason	Norwalk, Ohio	Balances, spring	July 15, 1862.
34,737	Burnham, O. R	New York, N. Y	Skirts, hoop	Mar. 25, 1862.
34,942	Burns, William B	East Saginaw, Mich	Saw, mills	April 15, 1862.
36,701	Burnside, John	Washington, D. C	Houses, portable	Oct. 21, 1862.
	Burr, Henry A. (*See* Wells, Henry A., assignor.)			
37,084	Burr, Henry A., and Lucius E. Rockwell	New York, N. Y	Lubricators	Dec. 9, 1862.
37,148	Burr, Murrin	Plymouth, Mich	Separators, grain	Dec. 16, 1862.
36,204	Burr, M. C	Owatanna, Minn	Clothes-dryer	Aug. 19, 1862.
34,238	Burrell, James	Central City, Col. Ter	Amalgamator and ore-crusher	Jan. 28, 1862.
	Burridge & Brainerd. (*See* Brainerd, Jehu, assignor.)			
	Burridge, W. H., and Jehu Brainerd. (*See* Brainerd & Burridge.)			
35,078	Burrows, Edmund F	Mystic River, Conn	Brake for railroads, self-acting	April 29, 1862.
35,992	Burt, Lorin	United States	Cloth, rubber, figured, manufacture of	July 29, 1862.
1,572	Burt, John W	New York, N. Y	Anklet (Design)	May 6, 1862.
1,625	Burt, John W	New York, N. Y	Anklet, ornamental (Design)	Aug. 12, 1862.
1,675	Burt, John W	New York, N. Y	Anklet (Design)	Dec. 9, 1862.
36,137	Burt, William L	Cambridge, Mass	Carriages, street railway	Aug. 12, 1862.
	Burwick, Wm. H. (*See* Stokes, Benj. S., assignor.)			
34,347	Buser, John	New York, N. Y	Bottling apparatus	Feb. 11, 1862.
37,216	Bush, Francis	Boston, Mass	Cartridge boxes	Dec. 23, 1862.
34,814	Bush, Timothy M	Huron county, Ohio	Sawing machines	April 1, 1862.
34,815	Bush, William	Wilmington, Del	Tanning for morocco and other grain-finished leather	April 1, 1862.
35,297	Bushor, Charles	Philadelphia, Pa	Loading coals, &c., machine for	May 20, 1862.
36,766	Buss, G. W	Boston, Mass	Wagons	Oct. 28, 1862.
35,799	Butler, H. V., and J. C. Hoadley, assignor to H. V. Butler.	New York, N. Y	Speed on machinery, device for changing	June 24, 1862.
36,878	Butterworth, Joshua H.; ass'r to self and Henry McFarlan.	Dover, N. J	Boilers, steam, machinery for making brace-jaws for	Nov. 4, 1862.
35,135	Buttles, Orin M	Milwaukie, Wis	Stoves	May 6, 1862.
35,079	Button, Lysander, and Robert Blake	Waterford, N. Y	Pumps	April 29, 1862.
34,712	Cables, Jas. H., assignor to the American Knife Company.	Plymouth Hollow, Conn	Knife, fork, and spoon, packing of	Mar. 18, 1862.
35,298	Cahoon, Alvin, jr	Harwich, Mass	Levels, spirit, combined	May 20, 1862.
36,366	Cahoon, Charles W	Portland, Me	Lamps	Sept. 2, 1862.
36,451	Cahoon, Charles W	Portland, Me	Lamps	Sept. 16, 1862.
	Cain, C. L., and D. M. Gunn. (*See* Gunn & Cain.)			
35,136	Cain, John G	Smith's Mills, Pa	Table and sink, combination of	May 6, 1862.
35,137	Calkin, John H	Troy, Pa	Axles of wheels, lubricating	May 6, 1862.

34,402	Callender, Mills L	New York, N. Y	Burners, hydro-carbon	Feb. 18, 1862.
35,412	Callender Mills L., and Nelson W. Northrup, assignors to themselves and Charles H. Welling.	New York, N. Y	Ships, defensive armor for	May 27, 1862.
36,452	Callender, Mills L	New York, N. Y	Burners, vapor	Sept. 16, 1862.
36,656	Callender, Mills L., assignor through mesne assignments to Charles H. Welling.	New York, N. Y	Projectiles, explosive, compound	Oct. 14, 1862.
	Campbell, A., and Jas. Clayton. (*See* Clayton & Campbell.)			
34,051	Campbell, Andrew D., and Elbert Perce	New York, N. Y	Casks for holding oil, quicksilver, &c	Jan. 7, 1862.
	Campbell, A. G., and Edw'd Gwyn. (*See* Gwyn & Campbell.)			
35,214	Campbell, Charles	Yellow Head, Ill	Broom corn, machine for breaking	May 13, 1862.
	Campbell, Gage & Gage. (*See* Kavanaugh, Luke, ass'r.)			
35,968	Campbell, Geo., assignor to himself and George and George C. Gage.	Waterford, N. Y	Knitting machines, circular	July 22, 1862.
	Campbell, Peter F. (*See* La Baw, George W., assignor.)			
	Campbell, Peter F., and George W. La Baw. (*See* La Baw & Campbell.)			
36,601	Campbell, Samuel S., and Josiah Goodwin	Philadelphia, Pa	Confectionery, machinery for making	Oct. 7, 1862.
35,504	Campbell, Thomas J	Lincoln, Ill	Ordnance, revolving, automatic	June 10, 1862.
37,149	Canfield, David W	New York, N. Y	Shoulder-brace and suspenders combined	Dec. 16, 1862.
34,738	Canfield, James	Sabula, Iowa	Gold-washer	Mar. 25, 1862.
36,641	Cantel, Lazare	New York, N. Y	Canteen	Oct. 14, 1862.
35,215	Cantelo, W. J	Philadelphia, Pa	Paper, and other purposes, application of the hibiscus moschentos to the manufacture of.	May 13, 1862.
35,969	Canter, William, assignor to Samuel Bertusteln	New York, N. Y	Chenille, machinery for manufacturing	July 22, 1862.
35,414	Carey, John, assigner to Samuel A. Smith	Brooklyn, N. Y	Bedsteads, metallic	May 27, 1862.
35,505	Carhart, Peter S	Collamer, N. Y	Cultivators	June 10, 1862.
35,809	Carley, Timothy L., and Amos Jackson	Marcellus, N. Y	Water-wheel	July 8, 1862.
35,198	Carpenter, Hiram, assignor to Henry V. Gahagan	New York, N. Y	Railways, construction of	May 6, 1862.
	Carpenter, Horace, & Co. (*See* Lockwood, Geo. W., ass'r.)			
35,138	Carpenter, Mary P	Buffalo, N. Y	Ironing or fluting machine	May 6, 1862.
37,217	Carpenter, R. W	Brooklyn, N. Y	Piano-forte, combination of reed instruments with the	Dec. 23, 1862.
34,876	Carpenter, Tisdale	Providence, R. I	Engines, steam, method of oiling slides of	April 8, 1862.
34,877	Carpenter, Tisdale	Providence, R. I	Engines, steam, governor connexions for	April 8, 1862.
34,878	Carpenter, Tisdale	Providence, R. I	Piston packing	April 8, 1862.
	Carr, Charles, and Jas. A. Bowie. (*See* Goodyear, Robert B., assignor. Reissue.)			
	Carr, G. W., & Co. (*See* Stratton, Richard A., assignor.)			
	Carr, G. W., & Co. (*See* Stratton, Richard A., assignor.)			
	Carr, G. W., & Co. (*See* Stratton, Richard A., assignor.)			
	Carr, R. C., and J. P. and Joseph Baker. (*See* Cummings, Daniel M., assignor.)			
	Carter, Charles H. A. (*See* Perry, Stuart, assignor.)			
	Carter, Charles H. A. (*See* Perry, Stuart, assignor.)			
	Carter, Charles H. A. (*See* Perry, Stuart, assignor.)			
	Carter, Charles H. A. (*See* Perry, Stuart, assignor.)			
	Carter, Charles H. A. (*See* Perry, Stuart, assignor.)			
35,216	Carton, John	Utica, N. Y	Heaters	May 13, 1862.
36,274	Carton, John	Utica, N. Y	Lamps, railroad	Aug. 26, 1862.
36,602	Carton, John	Utica, N. Y	Lamps, railroad	Oct. 7, 1862.
34,199	Cary, Alanson	Worcester, Mass	Cars, horse railroad, starting apparatus for	Jan. 21, 1862.
34,668	Cary, R. D	Philadelphia, Pa	Sweeping machines	Mar. 18, 1862.
34,403	Casamajor, Paul	New York, N. Y	Vinegar, apparatus for making	Feb. 18, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
34,478	Caso, C. G., and J. M Baker	Battle Creek, Mich	Weighing grain, automatic machines for	Feb. 25, 1862.
35,668	Cass, A. B.	Muscatine, Iowa	Cultivators	June 24, 1862.
34,479	Cassell, H., and W. F. Semple	Fredericktown, Ohio	Bellows for blowpipes	Feb. 25, 1862.
34,660	Cessford, George, assignor to John S. and Merritt Peckham	Utica, N. Y.	Dampers, stove	Mar. 11, 1862.
35,275	Chadwick, Robert, and Norman Allen, assignors to Robert Chadwick.	Hartford, Conn	Bullets, machine for casting	May 13, 1862.
34,879	Chaffee, William H.	Flint, Mich	Measuring distances, machines for	April 8, 1862.
	Chalmers, Thomas, *et al.* (*See* Fraser, D. R., assignor.)			
	Chalmers, Thos., *et al.* (*See* Hedges, Wheeler, ass'r. Reissue.)			
	Chalmers, Thos., *et al.* (*See* Hedges, Wheeler, ass'r. Reissue.)			
	Chalmers, Thos., *et al.* (*See* Hedges, Wheeler, ass'r. Reissue.)			
	Chalmers, Thos., *et al.* (*See* Hedges, Wheeler, ass'r. Reissue.)			
	Chalmers, Thomas, *et al.* (*See* Gates, P. W., assignor.)			
34,392	Chamberlain, D. H., assignor to himself and John Hartshorn	West Roxbury, Mass	Generating vapor, apparatus for	Feb. 11, 1862.
36,275	Chamberlin, Spencer C.	Berlin, Mass	Boot and shoe soles, shoulderstick for finishing	Aug. 26, 1862.
34,546	Chandler, Frederick, assignor to himself and C. A. Cousins	Charlestown, Mass	Stoves, camp	Feb. 25, 1862.
34,161	Chandler, John	Collinsville, Conn	Emery wheels, machinery for cleaning	Jan. 7, 1862.
34,428	Chandler, Moses	East Corinth, Me	Hoes, horse	Jan. 14, 1862.
35,922	Chapelle, François A.	Paris, France	Tents	July 22, 1862.
36,942	Chapin, Edward J.	Ottawa, Ill	Watchmakers' lathes	Nov. 18, 1862.
34,669	Chapin, Nathan	East Saginaw, Mich	Salt, apparatus for the manufacture of	Mar. 18, 1862.
34,562	Chapin, R. S.	New York, N. Y	Lamps	Mar. 4, 1862.
36,992	Chaplin, Atlas H.	Adrian, Mich	Rakes, horse	Nov. 25, 1862.
36,693	Chapman, Dudley B., assignor to himself and Ebenezer D. Draper.	Milford, Mass	Soap, manufacture of	Oct. 14, 1862.
37,150	Chapman, Matthew	Greenfield, Mass	Knives, attaching handles to	Dec. 16, 1862.
34,563	Chapman, William Z. W.	New York, N. Y	Cartridge boxes, fastening for	Mar. 4, 1862.
1,676	Chargois, John B.	New York, N. Y	Trade-mark (Design)	Dec. 9, 1862.
	Chase, Amzi, *et al.* (*See* Streeter, Alonzo, assignor.)			
34,739	Chase, Frank	South Sutton, N. H	Fastenings, blind and shutter	Mar. 25, 1862.
36,642	Chase, Joseph	Lowell, Mass	Flocks, machines for cutting	Oct. 14, 1862.
36,138	Chase, Valentine	Parish of St. Mary, La	Tenoning machines	Aug. 12, 1862.
	Chatham Lock Company. (*See* Long, Sam'l N., assignor.)			
	Cheever, John H. (*See* Mayall, Thos. J., ass'r. Reissue.)			
	Cheever, John H. (*See* Mayall, Thos. J., ass'r. Reissue.)			
	Cheney, Charles. (*See* Spencer, C. M., assignor.)			
	Cheney, Frank, and William F. Goulding. (*See* Goulding & Cheney.)			
	Cherevoy, E. B., *et al.* (*See* Shannon, Alexander, assignor.)			
	Chesebro, Allen D. (*See* Reed, Osmond, assignor.)			
34,480	Chester, Charles T.	New York, N. Y	Telegraphs, alphabetical	Feb. 25, 1862.
	Chester, C. T. & J. N. (*See* Smith, John E., assignor.)			
37,032	Chester, R.	Chicago, Ill	Lanterns, signal	Dec. 2, 1862.
36,070	Chevalier, Edward Y.	Fort Wayne, Ind	Bee-hives	Aug. 5, 1862.
	Cheyney, Waldron J. (*See* Fleury & Adams, assignors.)			

35,299	Chichester, Lewis S.	New York, N. Y	Weighing machines, grain	May 20, 1862.
	Child & Warder. (*See* Cochrane, William F., assignor.)			
	Child & Warder. (*See* Cochrane, William F., assignor.)			
	Child & Warder. (*See* Cochrane, William F., assignor.)			
	Child & Warder. (*See* Cochrane, William F., assignor.)			
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	Child & Warder. (*See* Cochrane, William F., assignor.)			
	Child & Warder. (*See* Cochrane, William F., assignor.)			
	Child & Warder. (*See* Cochrane, William F., assignor.)			
	Child & Warder. (*See* Cochrane, William F., assignor.)			
35,020	Chilson, Gardner	Boston, Mass	Dampers	April 29, 1862.
35,139	Chilson, Gardner	Boston, Mass	Heaters, sad-iron	May 6, 1862.
35,361	Chilson, Gardner	Boston, Mass	Broilers	May 27, 1862.
35,506	Chilson, Gardner	Boston, Mass	Stoves, parlor	June 10, 1863.
34,943	Chinnock, Charles	Brooklyn, N. Y	Measures, beer	April 15, 1862.
35,362	Chinnock, Charles	Brooklyn, N. Y	Corkscrew	May 27, 1862.
	Chipman, A. (*See* Rowell, S. P., assignor.)			
36,507	Christian, George H	New York, N. Y	Pin holder	Sept. 23, 1862.
36,892	Christie, H. H	Perch River, N. Y	Drag and cultivator combined	Nov. 11, 1862.
36,071	Christie, Jacob D.	Hackensack, N. J	Water elevators	Aug. 5, 1862.
34,481	Christy, John	Baltic, Conn	Smoothing irons	Feb. 25, 1862.
36,072	Churchill, Castlo	New Hartford, Ia	Seeding machines	Aug. 5, 1862.
35,669	Clahaugh, Norman H.	Frederick city, Md	Washing machines	June 24, 1862.
34,087	Clapp, M. R., assignor to himself and Edward Mynderse	Seneca Falls, N. Y	Fire-engines, steam	Jan. 7, 1862.
36,993	Clark, Alinzor	St. Johnsville, N. Y	Metal plates, apparatus for cutting tinned implements from	Nov. 25, 1862.
36,073	Clark, Clement M.	Cincinnati, Ohio	Sowers, broadcast	Aug. 5, 1862.
34,129	Clark, Edwin	Lancaster, Pa	Mills, flouring and grist	Jan. 14, 1862.
34,130	Clark, Edwin	Lancaster, Pa	Mills, grist and flouring, alarm indicator for	Jan. 14, 1862.
36,893	Clark, Edwin	Lancaster, Pa	Mills, grinding	Nov. 11, 1862.
	Clark, F. M. (*See* Ferrell, A. C., assignor.)			
35,012	Clark, Hiram	Rochester, N. Y	Skates	April 22, 1862.
34,239	Clark, James M.	Lancaster, Pa	Mills, apparatus for feeding	Jan. 28, 1862.
37,151	Clark, James M.	Lancaster, Pa	Mills, grinding	Dec. 16, 1862.
34,240	Clark, James W	Springfield, Mass	Screws, tools for making	Jan. 28, 1862.
37,218	Clark, John D.	Leicester, Mass	Pumps, chain, buckets for	Dec. 23, 1863.
	Clark, M. S. (*See* Ost, Adam, assignor.)			
34,348	Clark, Nelson W	Clarkston, Mich	Salt, apparatus for the manufacture of	Feb. 11, 1862.
	Clark, P. J., and W. H. Green. (*See* Green & Clark. Design.)			
	Clark, P. J., and W. H. Green. (*See* Green & Clark. Design.)			
34,816	Clark, S. G.	Cleveland, Ohio	Stills for coal-oils	April 1, 1862.
	Clark, S. S. (*See* Green & Clark, assignors. Design.)			
	Clark, S. S. (*See* Green & Clark, assignors. Design.)			
34,944	Clark, William A.	Bethany, Conn	Bullet moulds	April 15, 1862.
	Clark, W. J., and E. W. Pierce. (*See* Pierce & Clark.)			
	Clark, W. J., & Co. (*See* Pierce & Clark, assignors.)			
34,404	Clarke, J., and D. French	Syracuse, N. Y	Pavements, roofing, and other purposes, composition for	Feb. 18, 1862.
	Clarke, Leverett H. (*See* Arthur, William R., assignor.)			
35,021	Clarke, Orlando, and Isaac Utter	Rockford, Ill	Saccharine juices, evaporator for	April 29, 1862.
36,931	Clay, James O., assignor to F. C. Gridley	Hudson, Wis	Weather strips	Nov. 11, 1862.
34,393	Clayton, James, and A. Campbell, assignors to Root's Rotary Steam Engine Company	Brooklyn, N. Y	Engine, rotary	Feb. 11, 1862.
34,290	Clemens, Stillman A.	Rockford, Ill	Buildings, construction of walls of	Feb. 4, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
34, 349	Clemens, Stillman A	Rockford, Ill	Hemp breakers	Feb. 11, 1862.
34, 920	Clement, Daniel B., assignor to C. B. Boyce & Co	Milton, Mass	Clothes wringer	April 8, 1862.
36, 894	Clements, George M	Kenduskeag, Me	Cultivators	Nov. 11, 1862.
36, 190	Clements, James, assignor to himself and Sedgwick Dean	Ann Arbor, Mich	Can for fluids	Aug. 12, 1862.
	Cleveland, S. C. (*See* Beach, Charles, assignor.)			
35, 486	Cleveland, S. E., assignor to Jonathan Mahew and Thomas S. Ray.	Buffalo, N. Y	Lights, head, for locomotives	June 3, 1862.
34, 564	Clewley, Charles W	Providence, R. I	Watch and locket cases	March 4, 1862.
	Clifford, John C. (*See* Nimbs, A. B., assignor.)			
36, 603	Clissold, William	Dudbridge Works, Stroud, England	Wool, machinery for oiling	Oct. 7, 1862.
34, 121	Clogston, Thomas S., assignor to himself and Horace P. Wakefield	Boston, Mass	Ranges, kitchen	Jan. 7, 1862.
35, 363	Close, Charles T	New York, N. Y	Lamps, manufacture of	May 27, 1862.
36, 453	Clough, Theodore	New York, N. Y	Gas, illuminating, preparing petroleum for manufacture of	Sept. 16, 1862.
35, 300	Clow, Abram	Port Byron, N. Y	Boats, canal, attachment of whiffletrees to the tow-lines of	May 20, 1862.
35, 923	Clow, Daniel	Janesville, Wis	Harvesters	July 22, 1862.
37, 069	Clow, Philip L., assignor to himself and Winsor Stone	Cohoes, N. Y	Fastenings, sash	Dec. 2, 1862.
34, 817	Coale, Charles	New Brighton, Pa	Varnish, Japan	April 1, 1862.
	~~Coats, C. S., and Wm. H. Gingrich.~~ (~~See Gingrich & Coats.~~)			
	Cobb, A. E., *et al.* (*See* Hopkins, Charles W., assignor.)			
36, 604	Cobb, Russell	Hadley, Mich	Rack, hay and grain	Oct. 7, 1862.
36, 278	Cochran, Archibald P	Louisville, Ky	Pressers, tobacco, retainers for	Aug. 26, 1862.
35, 670	Cochran, John D	Milford, N. H	Clothes wringer	June 24, 1862.
	Cochran, Thomas. (*See* Witsil, George L., assignor.)			
34, 670	Cochrane, James	Harburn, North Britain	Gas metres, wet	Mar. 18, 1862.
34, 131	Cochrane, William Frazer	Springfield, Ohio	Threshers and separators, grain	Jan. 14, 1862.
34, 132	Cochrane, William Frazer	Springfield, Ohio	Threshers and separators, grain	Jan. 14, 1862.
34, 133	Cochrane, William Frazer	Springfield, Ohio	Threshers and separators, grain	Jan. 14, 1862.
36, 561	Cochrane, Wm. F., assignor to himself and Warder & Child	Springfield, Ohio	Mills, flour, hopper boys for	Sept. 12, 1862.
37, 125	Cochrane, Wm. F., assignor to himself and Warder & Child	Springfield, Ohio	Threshers and separators, grain	Dec. 9, 1862.
37, 126	Cochrane, Wm. F., assignor to himself and Warder & Child	Springfield, Ohio	Threshers and separators, grain	Dec. 9, 1862.
37, 127	Cochrane, Wm. F., assignor to himself and Warder & Child	Springfield, Ohio	Threshers and separators, grain	Dec. 9, 1862.
37, 128	Cochrane, Wm. F., assignor to himself and Warder & Child	Springfield, Ohio	Threshers and separators, grain	Dec. 9, 1862.
37, 129	Cochrane, Wm. F., assignor to himself and Warder & Child	Springfield, Ohio	Threshers and separators, grain	Dec. 9, 1862.
37, 130	Cochrane, Wm. F., assignor to himself and Warder & Child	Springfield, Ohio	Threshers and separators, grain	Dec. 9, 1862.
37, 131	Cochrane, Wm. F., assignor to himself and Warder & Child	Springfield, Ohio	Threshers and separators, grain	Dec. 9, 1862.
37, 132	Cochrane, Wm. F., assignor to himself and Warder & Child	Springfield, Ohio	Threshers and separators, grain	Dec. 9, 1862.
34, 241	Codding, C. A	Augusta, Mich	Presses, cheese	Jan. 28, 1862.
35, 730	Coffin, Z. E., assignor to himself and Wm. P. Hunt	Newton Centre, Mass	Capstan	June 24, 1862.
35, 415	Coggeshall, W., assignor to himself and W. T. Coggeshall	Finley, Ohio	Ploughs	May 27, 1862.
35, 586	Cogswell, Charles B	Essex, Mass	Rakes, horse	June 17, 1862.
34, 405	Cogswell, Mortimer C., and Addison G. Williams	Buffalo, N. Y	Dryers, grain	Feb. 18, 1862.
1, 599	Cohen, Lewis I	New York, N. Y	Cards, playing, backs of (Design.)	May 27, 1862.
34, 622	Colahan, Samuel	Cleveland, Ohio	Press, hay	Mar. 11 1862.

34, 671	Colburn, A	Leominster, Mass	Vehicles, mode of attaching horses to, and detaching them therefrom.	Mar. 11, 1862.
35, 507	Colburn, George F. J	Newark, N. J	Lamp reflector and chimney protector	June 10, 1862.
36, 339	Colburn, George F. J	Newark, N. J	Lamps, applying reflectors to	Sept. 2, 1862.
36, 895	Colby, Daniel C	Claremont, N. H	Cultivators	Nov. 11, 1862.
34, 818	Colby, George J	Waterbury, Vt	Rubber, India, rolls to metallic shafts, fastening	April 1, 1862.
37, 152	Cole, Gilbert M	Folsom City, Cal	Pumps, railroad, mode of operating	Dec. 16, 1862.
	Colegrove, C. H., and G. A. Poppy. (*See* Poppy & Colegrove.)			
35, 217	Coleman, Charles C	Worcester, Mass	Fire-arms, breech-loading	May 20, 1862.
	Collin, John B. (*See* Pratt, E. L., assignor.)			
34, 105	Collins, George, and Enoch Piper	Camden, Me	Pumps	Jan. 7, 1862.
34, 406	Collins, James	Farmington, Ill	Cultivators	Feb. 18, 1862.
34, 623	Colvin, L. O., and O. H. Gardner	Philadelphia, Pa	Telegraphing by light	Mar. 11, 1862.
34, 740	Colvin, Robert J	Lancaster, Pa	Sword and pistol combined	Mar. 25, 1862.
36, 752	Combe, William, assignor to Nathaniel O. Hawkshurst	New York, N. Y	Gas-purifiers, wooden sieves for	Oct. 21, 1862.
37, 085	Comins, George T	Lowell, Mass	Bed-bottom	Dec. 9, 1862.
34, 619	Comly, John P	Dayton, Ohio	Flax and hemp, to make them resemble cotton	Mar. 4, 1862.
	Comstock, Alden H. (*See* Heston, William, assignor.)			
35, 218	Comstock, Cicero	Milwaukie, Wis	Ploughs, rotary	May 20, 1862.
34, 482	Conant, Charles B	Hardwick, Mass	Jacks, lifting	Feb. 25, 1862.
35, 562	Conant, Hezekiah, assignor to the Willimantic Linen Co	Willimantic, Conn	Label thread spools, machine to	June 10, 1862.
35, 487	Conklin, John C., assignor to George W. Depew	Yorktown, N. Y	Harrows	June 3, 1862.
	Condit, Israel D. (*See* Randall, H. L., assignor.)			
36, 394	Cone, E. A	Milford, Mich	Clothes-pin	Sept. 9, 1862.
34, 242	Connell, J. M., and John S. Hall	Newark, Ohio	Shells for rifled ordnance	Jan. 28, 1862.
34, 198	Connelly, Joseph H., and J. W. Phillips	Wheeling, Va	Boiler furnace, steam	Jan. 21, 1862.
36, 277	Connelly, Joseph H., and John Cook	Wheeling, Va	Lamps, wicks for	Aug. 26, 1862.
35, 435	Conover, S. B	New York, N. Y	Diggers, potato	June 3, 1862.
34, 921	Conrad, Ernst E., assignor to Henry Coulter	Philadelphia, Pa	Lamp shades, holders for	April 8, 1862.
34, 407	Conrad, Hannah D	Dayton, Ohio	Sewing machines, setting and threading needles in	Feb. 18, 1862.
34, 291	Conroy, Edward	Boston, Mass	Corks, machines for cutting	Feb. 4, 1862.
35, 301	Converse, C. C	Elmira, N. Y	Mangle	May 20, 1862.
35, 563	Cook, George, assignor to himself and Wm. Scarlett	Bristol Station, Ill	Harrows	June 10, 1862.
34, 106	Cook, George H	New Brunswick, N. J	Tobacco pipes, compositions for lining	Jan. 7, 1862.
	Cook, George H., and Jas. Jenkins. (*See* Jenkins & Cook.)			
34, 624	Cook, G. W., and Z. E. B. Nash	St. Paul, Minn	Pumps	Mar. 11, 1862.
35, 082	Cook, James M	Taunton, Mass	Engines, locomotive, signal mechanism for	April 29, 1862.
	Cook, John, and Jos. H. Connelly. (*See* Connelly & Cook.)			
34, 243	Cook, Ransom	Saratoga Springs, N. Y	Lunch-box	Jan. 28, 1862.
35, 488	Cooke, James C., assignor to himself and Julius Hotchkiss	Middletown, Conn	Fire-arms	June 3, 1862.
	Cooke, John. (*See* Petrie, John, jr., assignor.)			
35, 509	Cooley, Asahel	Chicago, Ill	Pumps	June 10, 1862.
34, 867	Cooley, A. B	Philadelphia, Pa	Floating battery	April 1, 1862.
35, 219	Cooley, A. B	Philadelphia, Pa	Propellers, adjustable, reversible	May 13, 1862.
35, 587	Cooley, A. B	Philadelphia, Pa	Projectiles, mode of discharging	June 17, 1862.
36, 709	Cooley, Henry H	Battle Creek, Mich	Pumps, force, pistons for	Oct. 21, 1862.
35, 436	Coombs, John W	Mt. Vernon, N. Y	Coal-scuttles	June 3, 1862.
34, 244	Coon, Simeon	Ithaca, N. Y	Window-sash and setting sash therein	Jan. 28, 1862.
35, 083	Cooper, James Maslin	Pittsburg, Pa	Axles, railroad	April 29, 1862.
36, 139	Cooper, N. B	Gratis, Ohio	Cultivators	Aug. 12, 1862.
35, 589	Copeland, John, and George P. Martin	Quasqueton, Iowa	Churns	June 17, 1862.
35, 671	Corbett, E. M	New York, N. Y	Camera stand	June 24, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	Corbin, P. and F. (*See* Arnold, Stephen D., ass'r. Design.)			
	Corbin, P. & F. (*See* Arnold, Stephen D., assignor.)			
	Cordnan, Joseph, *et al.* (*See* Outrander, Reeder & Cordnan.)			
1,567	Core, W. H., assignor to himself and A. Lorenz	New York, N. Y	Show-case (Design)	April 22, 1862.
	Core, W. H., and A. Lorenz. (*See* Hesdra, Constant, assignor. Design.)			
36,833	Corey, Alfred B	Sprague, Conn	Warps, machinery for dressing and sizing	Nov. 4, 1862.
36,278	Corliss, George H	Providence, R. I	Boilers, steam	Aug. 26, 1862.
36,279	Corliss, George H	Providence, R. I	Boilers, steam, from priming, method of preventing	Aug. 26, 1862.
36,280	Corliss, George H	Providence, R. I	Condenser, surface	Aug. 26, 1862.
36,281	Corliss, George H	Providence, R. I	Steam generators	Aug. 26, 1862.
37,086	Cornelius, Robert	Philadelphia, Pa	Lamps	Dec. 9, 1862.
36,943	Cotter, C. B	Milford, Pa	Casting metals, moulds for	Nov. 18, 1862.
36,140	Cotton, Joseph H	Boston, Mass	Iron tubing, manufacture of	Aug. 12, 1862.
37,087	Cotty, Edward	Washington, D. C	Knee-joints, artificial	Dec. 9, 1862.
	Couch, John O., and Alfred M. Bailey (*See* Bailey & Couch.)			
	Coulter, Henry. (*See* Conrad, Ernst E., assignor.)			
1,295	Coupier, Jean Theodore, and M. A. C. Mellier, assignors to Coe S. Buchanan.	New York, N. Y	Paper stuff, preparation of (Reissue)	Mar. 25, 1862.
35,140	Court, Edward	Coeymans, N. Y	Vehicles, wheel, brake for	May 6, 1862.
34,625	Courter, D. A	Beloit, Wis	Pistol with a sword, combining a	Mar. 11, 1862.
	Cousins, C. A. (*See* Chandler, Frederick, assignor.)			
34,408	Covell, Edward T	New Bedford, Mass	Lamps	Feb. 18, 1862.
	Cowel, Joel, jr., and E. Edwards. (*See* Edwards & Cowel.)			
36,944	Cowing, John P	Seneca Falls, N. Y	Bell-yoke and fastening	Nov. 18, 1862.
34,197	Cowles, Lorenzo D	Armada, Mich	Carriages	Jan. 21, 1862.
33,364	Cox, Edward	Covington, Ky	Armor-plates, defensive	May 27, 1862.
1,327	Cox, Sam'l A., dec'd, assignor, through mesne assignments, to George P. Cox, adm'r of said Sam'l A. Cox, dec'd.	Malden, Mass	Railroad chairs, wrought-iron, machine for bending the lips of. Reissue.	Aug. 12, 1862.
36,508	Cox, Thomas S	Lafayette, Ind	Mills, sugar	Sept. 23, 1862.
	Cox, Whiteman, and Cox. (*See* Smith & Brown, assignors. Design.)			
34,409	Craig, Henry	Cleveland, Ohio	Microscopes	Feb. 18, 1862
34,350	Crandal, Isaac	Middlefield, N. Y	Wagons, pleasure	Feb. 11, 1862.
1,287	Crandall, Jesse A	New York, N. Y	Toy, rocking (Reissue)	Mar. 11, 1862.
34,672	Crane, Albert O	Hoboken, N. J	Boat, bridge and tent convertible	Mar. 18, 1862.
36,340	Crane, A. O	Hoboken, N. J	Submarine carriages	Sept. 2, 1862.
36,141	Crane, R. T	Chicago, Ill	Pipes, steam or hot-air	Aug. 12, 1862.
36,819	Crane, Samuel G., assignor to D. R. Barton	Rochester, N. Y	Skates	Oct. 28, 1862.
35,870	Crannell, John W	Springport township, Mich	Axles for vehicles	July 15, 1862.
1,357	Crawford, Benjamin, assignor to English, Bennett, Frisbee, and Crawford.	Alleghany City, Pa	Furnaces, steam boilers (Reissue)	Dec. 2, 1862.
37,070	Crawford, James, assignor to himself and W. H. McIntosh.	Roxbury, Mass	Flower stand	Dec. 2, 1862.
	Crawford, Jno., and George W. Fosdick. (*See* Fosdick & Crawford.)			

36,205	Crawford, W. H	New York, N. Y	Reflectors	Aug. 19, 1862.
1,508	Cridge, E. J	Troy, N. Y	Stove, plates of a (Designs)	Jan. 7, 1862.
35,141	Cridge, E. J	Troy, N. Y	Stoves, cooking	May 6, 1862.
34,394	Critcherson, John, assignor to self and George P. Towlo	Boston, Mass	Clothes wringer, roller for	Feb. 11, 1862
36,191	Critchett, Oliver G., assignor to self and Charles C. Dike	Stoneham, Mass	Eyelet machines	Aug. 12, 1862.
34,741	Crocker, John D	Norwich, Conn	Corks for stoppers, machines for cutting	Mar. 25, 1862.
34,945	Crocker, Samuel S	Lawrence, Mass	Paper pulp, machinery for cleaning	April 15, 1862.
	Crockett, John R. (*See* Phillips, George B., assignor.)			
37,026	Croghan, St. George, dec'd, by S. E. L. Croghan, admr'x	Flatbush, N. Y	Hoisting machines	Nov. 25, 1862.
1,562	Crompton, George	Worcester, Mass	Looms, weaver's top rail of (Design)	April 8, 1862.
	Crook, Thos., jr., and A. B. Davis. (*See* Davis & Crook.)			
36,557	Crosby, Augustine B., and Jesse Ladd	Greene, Me	Gold, fine particles of, machinery for collecting and amalgamating.	Sept. 30, 1862.
36,074	Crosby, C. O., and Henry Kellogg	New Haven, Conn	Trimmings, folded, machines for producing	Aug. 5, 1862.
36,454	Crosby, C. O., and Henry Kellogg	New Haven, Conn	Trimmings, tape, manufacture of	Sept. 16, 1862.
37,033	Crosby, C. O., and Henry Kellogg	Hartford, Conn	Frilling and crimping, machines for	Dec. 2, 1862.
36,558	Crosby, William H	Washington, D. C	Boilers for culinary purposes	Sept. 30, 1862.
35,993	Cross, Nelson	New York, N. Y	Chair, folding	July 29, 1862.
37,153	Cross, Nelson	New York, N. Y	Bedstead, expanding	Dec. 16, 1862.
35,437	Crowell, Luther C	West Dennis, Mass	Aerial machines	June 3, 1862.
36,075	Crowell, J. E	Chelsea, Mass	Flax cleaning and dressing machines	Aug. 5, 1862.
36,076	Crowley, J. L., and L. J. Johnston	Marion, Iowa	Sugar evaporators	Aug. 5, 1862.
	Crumb, W., and Wm. H. Palmer. (*See* Palmer & Crumb.)			
	Culsinier, J. F. J., and A. H. Lepley. (*See* Lepley & Culsinier.)			
36,643	Culver, J. E	Hudson, N. J	Steam generating apparatus	Oct. 14, 1862.
34,395	Cummings, Charles A., and Freeman M. Swallow	Worcester, Mass	Clothes wringer	Feb. 11, 1862.
36,767	Cummings, Daniel M., assignor to Joseph Baker and R. C. and J. P. Carr.	Enfield, N. H	Hames, adjustable	Oct. 28, 1862.
37,034	Cummings, Daniel M	Enfield, N. H	Water-wheels	Dec. 2, 1862.
35,924	Cummings, G. N	Meriden, Conn	Door-knobs to their spindles, mode of attaching	July 22, 1862.
34,880	Cummings, Perley D	Portland, Me	Burner, kerosene oil	April 8, 1862.
36,443	Cummins, Isaac, assignor to himself and E. J. Post	Vienna, N. J	Threshing machines, method of operating shakers of	Sept. 9, 1862.
	Cunningham, Robert D. (*See* Miller, John C., assignor.)			
36,390	Cunningham, R. H., assignor to Wm. P. Bliss	Schaghticoke, N. Y	Gunpowder, cylinders for polishing	Aug. 26, 1862.
35,013	Cunningham, Wm. R	Brooklyn, Ohio	Water-elevators	April 22, 1862.
36,896	Currier, Alexander C	Hallowell, Me	Dome or cupola, shot-proof	Nov. 11, 1862.
	Currier, J. B., and A. J. Simpson. (*See* Simpson & Currier.)			
35,302	Currier, James C	Bradford, Vt	Window-sashes	May 20, 1862.
35,672	Curtis, Herbert, and Alfred Tufts	Charlestown, Mass	Hats, sweat-leather ventilators for	June 24, 1862.
34,228	Curtis, Stephen, jr., assignor to himself and Henry Yale	New York, N. Y	Pitchers, ice	Jan. 21, 1862.
	Curtis & Yale. (*See* Trent J. Lawson, assignor.)			
37,071	Custer, George, assignor to self, E. B. Root, and John J. Stevens.	Monroe, Mich	Cultivator tooth	Dec. 2, 1862.
36,206	Custor, George Y	Norristown, Pa	Lamps, coal-oil	Aug. 19, 1862.
34,742	Custer, J. D	Norristown, Pa	Lamp-burner	Mar. 25, 1862.
	Cutter, A. J., and William F. Grassler. (*See* Grassler & Cutter.)			
34,563	Cuypers, Francis H	Newark, N. J	Hinges and hooks	Mar. 4, 1862.
34,567	Dabney, G. A	San José, Cal	Churns, apparatus for operating	Mar. 4, 1862.
35,365	Daboll, William V	Cranston, R. I	Sweeping machines, street	May 27, 1862.
35,509	Daehne, Frederick Wilhelm	Swansea, Glamorganshire, G. B	Ores, extracting copper from	June 10, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	Dale, John G., and Nathaniel Lloyd. (*See* Lloyd & Dale.)			
	Daley, George H. (*See* Treat, Robert M., assignor.)			
36,897	Daley, George H., and Robert M. Treat	Morris, Conn	Rakes, horse	Nov. 11, 1862.
	Dalrymple, D. D., and J. Thompson. (*See* Thompson & Dalrymple.)			
35,084	Daniels, Horace	Pawtucket, R. I.	Thread, sewing, machinery for dressing	April 29, 1862.
35,810	Daniels, John E., and George S. Kendall	Boston, Mass.	Clothes wringer	July 8, 1862.
34,351	Daniels, R. A.	Wayne, Ohio	Hames, fastening for	Feb. 11, 1862.
36,509	Danielson, G.	Boston, Mass.	Tires, machines for upsetting	Sept. 23, 1862.
35,220	Danner, John	Canton, Ohio	Washing machine	May 13, 1862.
37,219	Danner, Josephus	Milton, Ill.	Cultivators	Dec. 23, 1862.
37,253	Darby, Asa L., assignor to self and John H. Balch	White Creek, N. Y.	Harvesters	Dec. 23, 1862.
35,085	Davenport, Joseph	Masillon, Ohio	Vehicles, springs for	April 29, 1862.
	Davidson, R. McC. (*See* Welsh, James A., assignor.)			
	Davies, E. M., and F. J. Rebbeck. (*See* Rebbeck & Davies.)			
	Davies, Henry, and Wm. Johnson. (*See* Johnson & Davies.)			
36,077	Davis, Abram	Chicago, Ill	Lanterns, wind-breakers for	Aug. 5, 1862.
34,410	Davis, A. B., and Thomas Crook, jr.	Philadelphia, Pa.	Corn-shellers	Feb. 18, 1862.
37,154	Davis, Augustus B.	Philadelphia, Pa.	Separators, straw and grain	Dec. 16, 1862.
34,411	Davis, G. B.	Chicago, Ill	Filters, water	Feb. 18, 1862.
35,303	Davis, Henry G.	New York, N. Y.	Splints, extension	May 20, 1862.
34,881	Davis, Job C., assignor to Edward Hall	Alameda county, Cal.	Arastra	April 8, 1862.
36,898	Davis, John	Alleghany City, Pa.	Harrows, seed-sowing	Nov. 11, 1862.
35,970	Davis, Richard M., assignor to Henry L. Hopkins	Eaton, N. Y.	Harvesters	July 22, 1862.
34,292	Davis, Samuel and Leander A.	Providence, R. I.	Washing machines	Feb. 4, 1862.
	Davis, Samuel M. (*See* Holston, John C., assignor.)			
34,882	Davis, Simeon C.	Medina, N. Y.	Grazing sheep and other animals, method of	April 8, 1862.
34,097	Davis, Theodore D., and John M. Waldron	Syracuse, N. Y.	Harvesters	Jan. 7, 1862.
36,282	Davis, Thomas M.	Philadelphia, Pa.	Refrigerator	Aug. 25, 1862.
34,743	Davis, William Wentworth	Portland, Me.	Stove-pipe thimbles	Mar. 25, 1862.
35,221	Davy, John T.	Troy, N. Y.	Stoves	May 13, 1862.
	Dawdy & Benfield. (*See* Benfield, E. M., assignor.)			
	Day, Horace H. (*See* Bird, J. N., assignor.)			
37,035	Day, Horace H.	New York, N. Y.	Ordnance, elastic breech for	Dec. 2, 1862.
36,768	Day, J. C.	Jersey City, N. J.	Cot, hammock	Oct. 28, 1862.
	Day, Jube, and Volney R. Beach. (*See* Beach & Day.)			
35,304	Day, Samuel F.	Balston Spa, N. Y.	Telegraphs, instruments for	May 20, 1862.
36,395	Dayton, Frederick, and W. S. Kelly	Watertown, Conn.	Stereoscopes	Sept. 9, 1862.
1,521	Dean, John, and Samuel P. Emerson	Worcester, Mass.	Photograph preserver (Design)	Feb. 4, 1862.
36,283	Dean, John	Worcester, Mass.	Card-holder	Aug. 26, 1862.
	Dean, Sedgwick. (*See* Clements, James, assignor.)			
36,455	Deane, Royal E.	New York, N. Y.	Stoves, cooking, or ranges	Sept. 16, 1862.
34,280	Dearborn, G. K., assignor to Samuel T. Tapley	Abington, Mass.	Heaters for passenger cars	Jan. 28, 1862.
36,207	Dearborn, Jonathan	Seabrook, N. H.	Latches, door	Aug. 19, 1862.
37,081	De Brame, J. A.	New York, N. Y.	Fibres from plants, machinery for separating	Dec. 2, 1862.
35,014	Dechant, Gregory W.	Derrysburg, Pa.	Meat-chopper, rotating	April 22, 1862.
	Decker, Franklin. (*See* Hall, O. J., assignor.)			
	De Clereq, Augustus H., and Augustus J. Scoville. (*See* Scoville & De Clereq.)			
36,142	Dederick, L. & P. K.	Albany, N. Y.	Windlass, horse-power	Aug. 12, 1862.
36,510	De Forest, Linson, assignor to self and Thos. B. De Forest.	Birmingham, Conn	Bustles, fastening hoop-ends in tabs of	Sept. 23, 1862.
36,877	De Forest, Thomas B., assignor to the Shelton & Osborn Skirt Company and L. & C. H. De Forest.	Birmingham, Conn	Skirts, hooped, apparatus for attaching clasps to	Nov. 4, 1862.
36,341	Defossez, Joseph	Paris, France	Lamp, safety	Sept. 2, 1862.
36,456	Degelow, G. Frederick	Bethlehem, Pa.	Wood, the grain of, process of imitating	Sept. 16, 1862.
34,996	De Guinon, R. V., and Geo. W. Barclay, assignors to John A. Newbould.	Hudson, N. J.	Presses	April 15, 1862.
35,510	De Haven, James S.	North Springfield, Ohio	Drills, grain	June 10, 1862.
36,208	De Haven, James S.	Akron, Ohio.	Hay, machines for loading and pitching	Aug. 19, 1862.
	Delamater, C. H. (*See* Reynolds, George H., assignor.)			
35,811	De Lapparent, Henry	Paris, France	Wood, process of preserving	July 8, 1862.
36,644	Delong, Jacob	Covert, N. Y.	Harrows	Oct. 14, 1862.
34,412	Deluce, Francis	Boston, Mass.	Centring implement	Feb. 18, 1862.
36,457	De Mey, Ferdinand A.	New York, N. Y.	Ordnance, field, mounting	Sept. 16, 1862.
	Denison, C. H., and H. N. Houghton. (*See* Houghton & Denison.)			
34,059	Denison, George D.	Troy, Ohio	Register, grain	Jan. 7, 1862.
37,155	Denkmann, William	Washington, D. C.	Air engines	Dec. 16, 1862.
34,107	Dennis, Jacob	Marion, Iowa	Washing machine	Jan. 7, 1862.
34,134	Dennis, J. H.	Louisville, Ky	Cars, railroad, running gear of	Jan. 14, 1862.
34,135	Dennis, J. H.	Louisville, Ky	Railroad turn-tables	Jan. 14, 1862.
34,136	Dennis, J. H.	Louisville, Ky	Springs, omnibus	Jan. 14, 1862.
1,258	Dennis, J. H.	Louisville, Ky	Fares on street railway cars, mode of collecting (Reissue)	Jan. 14, 1862.
1,262	Densmore, Byron, ass'r to D. M. Osborne and W. A. Kirby.	Sweden, N. Y.	Harvesters (Reissue)	Jan. 28, 1862.
35,086	Densler, F.	New York, N. Y.	Fire-arm, breech-loading, toy	April 29, 1862.
	Depew, George W. (*See* Conklin, John C., assignor.)			
36,550	Derby, Lyman	New York, N. Y.	Axles, attaching thills to	Sept. 30, 1862.
34,748	Derocquigny, A. C., F. D. Gance, and Louis Hanzo	New York, N. Y.	Sewing machines	Mar. 21, 1862.
34,413	Destouy, Augustus	New York, N. Y.	Sewing machines	Feb. 18, 1862.
34,673	Devair, William H.	Valley township, Mo.	Amalgamator for gold and silver	Mar. 18, 1862.
34,414	Devalin, William H.	Sacramento, Cal.	Engines, rotary	Feb. 18, 1862.
	Devlin, G. W., and H. C. Hunt. (*See* Hunt & Devlin.)			
	Devlin, John. (*See* Hussey, E. C., assignor.)			
36,703	Dewies, August Conrad	Crefeld, Prussia	Lubricators	Oct. 21, 1862.
34,090	De Witt, W.	Cleveland, Ohio	Harvesters	Jan. 7, 1862.
35,015	Dexter, F. W.	Randolph, N. Y.	Wheel-hubs, box-setters for	April 22, 1862.
	Dick, David	Meadville, Pa.	Presses (Extension)	Sept. 24, 1862.
36,769	Dick, David	Meadville, Pa.	Fuel, apparatus for using mineral oils as	Oct. 28, 1862.
34,459	Dickerman, Elliot, assignor to Metropolitan Washing Machine Company.	Middlefield, Conn	Clothes-wringing machines	Feb. 18, 1862.
34,293	Dickie, Edward P.	Fishkill Landing, N. Y.	Lamps, chimney for	Feb. 4, 1862.
36,770	Dickinson, John	New York, N. Y.	Millstones, apparatus for dressing	Oct. 28, 1862.
36,560	Dickinson, Martin L.	West Troy, N. Y.	Brush, whisk	Sept. 30, 1862.
34,294	Dickson, John	Newcastle, Pa.	Iron, sheet, manufacture of	Feb. 4, 1862.
35,366	Dickson, Perry	Utica, Minn.	Water-wheel	May 27, 1862.
36,995	Dickson, Perry	Utica, Minn.	Land conveyance, propellers for	Nov. 25, 1862.
	Dike, Charles C. (*See* Critchett, Oliver G., assignor.)			

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
36,704	Dikeman, Clarence S.	New York, N. Y.	Paper, vegetable, composition for treating	Oct. 21, 1862.
35,087	Dikeman, J., Remsen and J. J. Hewlett	Hempstead, N. Y.	Land, machines for marking and furrowing	April 29, 1862.
34,461	Dillingham, John, assignor to Jesse Follett	Turner, Me.	Boots and shoes, fender or sheath for	Feb. 18, 1862.
34,946	Dillingham, John	Turner, Me.	Saw-frames, wood	April 15, 1862.
36,880	Dillon, James, assignor to self and John B. Nichols	Lynn, Mass.	Soles, channelling tool for	Nov. 4, 1862.
35,589	Dillon, James M.	Wheeling, Va.	Governor, centrifugal	June 17, 1862.
37,088	Dimock, Samuel R.	Pittsfield, Mass.	Cars, railroad, brakes for	Dec. 9, 1862.
35,590	Dingee, W. W., and A. B. Farquahar	York, Pa.	Separators, grain	June 17, 1862.
34,352	Dirks, Rudolph	Philadelphia, Pa.	Springs, sash	Feb. 11, 1862.
34,947	Ditto, Joseph	New York, N. Y.	Cloth, felt, &c., water-proof coating for	April 15, 1862.
	Dixon, C. P., and Edward Learned. (*See* Wilson, James G., assignor.)			
35,305	Dixon, Rufus E.	New York, N. Y.	Tobacco pouches	May 20, 1862.
34,353	Doane, William H.	Chicago, Ill.	Stave machines, bed-plate of	Feb. 11, 1862.
34,566	Doane, William H.	Chicago, Ill.	Veneers, machines for cutting	Mar. 4, 1862.
34,883	Doane, W. H.	Chicago, Ill.	Sawing machines	April 8, 1862.
35,142	Doane, W. H.	Chicago, Ill.	Stave machine	May 6, 1862.
35,674	Doane, William H.	Cincinnati, Ohio	Barrel-heads, circling and bevelling machine	June 24, 1862.
36,861	Doane, William H., and William E. London	Cincinnati, Ohio	Planing and matching machine combined	Nov. 11, 1862.
36,705	Dobbins, Jacob	Litchfield, Mich.	Staves, machine for jointing and dressing	Oct. 21, 1862.
	Dodds, Wm. B., and Neil Macneale. (*See* Macneale & Dodds.)			
	Dodge, A. S. (*See* Harding, Abner S., assignor.)			
34,819	Dodge, George H.	Camden, N. J.	Pumps	April 1, 1862.
35,871	Dodge, George H.	Camden, N. J.	Steam gauge	July 15, 1862.
	Dodge, J. G., and Thomas E. C. Brinley. (*See* Brinley & Dodge.)			
35,222	Dodge, Levi P.	Newburg, N. Y.	Pumps	May 13, 1862.
35,673	Dodge, R. D.	Adel, Iowa	Cultivators	June 24, 1862.
	Dodge, Thomas H. (*See* Bartlett, Stephen J., assignor.)			
	Dodge, Thomas H. (*See* Brown & Bartlett, assignors.)			
	Dodge, Thomas H. (*See* Brown & Bartlett, assignors.)			
	Dodge, Thomas H. (*See* Brown & Bartlett, assignors.)			
35,994	Dodge, William James	Kasoag, N. Y.	Car couplings	July 29, 1862.
35,415	Dodin, Joseph	New York, N. Y.	Lamps	Feb. 18, 1862.
	Dodin, Joseph. (*See* Whitcomb, James O., assignor.)			
37,220	Dodin, Joseph	Brooklyn, N. Y.	Lamps, coal-oil, burners for	Dec. 23, 1862.
34,820	Domis, Adam	New York, N. Y.	Cartridge box	April 1, 1862.
35,591	Donnan, William	Burgettstown, N. J.	Gates, stock, for water-courses	June 17, 1862.
35,925	Donning, James	Paterson, N. J.	Lamps, coal-oil, burners for	July 22, 1862.
35,996	Doolittle, James B.	Seymour, Conn.	Fire-arms, magazine	July 29, 1862.
35,971	Doolittle, J. H., assignor to himself and Franklin Farrel	Derby, Conn.	Wrenches, pipe	July 22, 1862.
36,511	Doolittle, Oscar	Danville, N. Y.	Ditching machines	Sept. 23, 1862.
34,724	Doremus, R. O., and B. L. Budd	New York, N. Y.	Gunpowder to form cartridges, treating	Mar. 18, 1862.
34,725	Doremus, R. O., and B. L. Budd	New York, N. Y.	Cartridges, ball	Mar. 18, 1862.
34,744	Doremus, R. Ogden, and Bern L. Budd	New York, N. York	Cartridges, water-proofing	Mar. 25, 1862.

36,078	Dorflinger, Christian	Brooklyn, N. Y.	Lamp-chimneys	Aug. 5, 1862.
36,079	Dorflinger, Christian	Brooklyn, N. Y.	Lamp-tops	Aug. 5, 1862.
	Dorflinger, Christopher, *et al.* (*See* Gallagher, John, assig'r)			
1,352	Dotterer, Davis H.	Chicago, Ill.	Journal boxes (Reissue.)	Nov. 4, 1862.
36,284	Doubleday, William E.	Brooklyn, N. Y.	Hats	Aug. 26, 1862.
36,561	Doud, C. H. and W. G.	Scranton, Pa.	Roofing, metal, machines for seaming	Sept. 30, 1862.
35,592	Dougherty, Andrew	Brooklyn, N. Y.	Paper-cutting machine	June 17, 1862.
34,416	Dougherty, James H.	Adamsville, Ohio	Churns	Feb. 18, 1862.
34,568	Douglas, Alexander, and S. S. Sherwood	English Neighborhood, N. J.	Skirts, ladies'	Mar. 4, 1862.
35,908	Douglas, Alexander, assignor to Douglas & Sherwood	English Neighborhood, N. J.	Trucks, store	July 15, 1862.
35,802	Douglas, Benjamin, assignor to W. and B. Douglas	Middletown, Conn.	Pumps	July 1, 1862.
35,059	Douglas, Joseph W., assignor to W. and B. Douglas	Middletown, Conn.	Pumps	April 22, 1862.
35,812	Dow, James C. and Ira Myrick	Henderson, Minn.	Rulers, parallel	July 8, 1862.
	Dow, L., and A. K. Johnston. (*See* Johnston & Dow.)			
	Dow, Lorenzo, and Algernon K. Johnston. (*See* Johnston & Dow.)			
37,089	Doyle, L. H.	Waterloo, Ia.	Cultivators	Dec. 9, 1862.
34,922	Draeger, Charles, assignor to himself and John Ott	Indianapolis, Ind.	Fire-arm, repeating	April 8, 1862.
35,813	Drake, A. A.	Flanders, N. J.	Churning, power for	July 8, 1862.
37,029	Drake, Darius F., assignor to A. G. Drake	Somerville, Mass.	Coat-sling, or carrier	Nov. 25, 1862.
35,144	Drake, Oliver P.	Boston, Mass.	Air, apparatus for carburetting	May 6, 1862.
1,538	Drake, P. H.	Binghampton, N. Y.	Bottle (Design.)	Feb. 18, 1862.
	Draper, Ebenezer D. (*See* Chapman, Dudley B., assignor.)			
35,593	Dresback, John I.	Circleville, Ohio	Shells, exploding, device of	June 17, 1862.
34,547	Drummond, James F., assignor to Charles T. Reynolds, Frederick W. Devoe, and Charles Pratt	New York, N. Y.	Cans for transportation, packing	Feb. 25, 1862.
34,948	Du Bois, F. N.	Chicago, Ill.	Amalgamating gold, machine for	April 15, 1862.
36,342	Du Bois, John	Williamsport, Pa.	Dams	Sept. 2, 1862.
36,512	Du Bois, John	Williamsport, Pa.	Bridges, piers of, mode of building	Sept. 23, 1862.
36,606	Du Bois, John	Williamsport, Pa.	Bridges, mode of constructing, setting, and removing	Oct. 7, 1862.
34,295	Duchemin, Watson	Charlottestown, Prince Edward's I.	Hoisting blocks, anti-friction, bearing of	Feb. 4, 1862.
35,143	Dudley, J. N.	Mitchell, Ia.	Calendars, portable	May 6, 1862.
34,945	Duffield, Joseph H.	Glassboro, N. J.	Tickets, railroad, cases for	Jan. 28, 1862.
35,223	Dugdale, James K.	Richmond, Ind.	Cultivators	May 13, 1862.
34,900	Duke, John	Milesburg, Pa.	Roofing	Jan. 21, 1862.
36,285	Duncan, Alexander	York, Pa.	Smut-machines	Aug. 26, 1862.
36,396	Dunham, Henry, jr.	Abington, Mass.	Sewing soles to boots and shoes, machines for	Sept. 9, 1862.
1,363	Dunham, Henry, jr.	Abington, Mass.	Sewing soles to boots and shoes, machines for. (Reissue.)	Dec. 16, 1862.
36,900	Dunham, Ira	Plattsburg, Mo.	Saddles	Nov. 11, 1862.
37,036	Dunham, O. H.	Washington, D. C.	Engines, steam, lubricator for	Dec. 2, 1862.
36,080	Dunham, Thomas H.	Boston, Mass.	Rope to fibre, machinery for reducing	Aug. 5, 1862.
	Dunlap, H. B., *et al.* (*See* Hernly, Jacob H., assignor.)			
	Dunn, Edward, and Wm. C. Holmes. (*See* Irvin, Thomas W., assignor.)			
34,713	Dunning, Elijah C., assignor to Irving Hull	Bridgeport, Conn.	Cartridge-cases, metallic	Mar. 18, 1862.
35,367	Dunphy, Henry	New York, N. Y.	Cloth-plaiting machines	May 27, 1862.
	Dunstone, Thomas, *et al.* (*See* Uren, Dunstone, & Blight.)			
37,156	Dunton Jacob	Philadelphia, Pa.	Tourniquets	Dec. 16, 1862.
37,221	Dunton Jacob	Philadelphia, Pa.	Can or bottle-stopper	Dec. 23, 1862.
35,306	Durant A. P.	Atlanta, Ill.	Cultivator and seed-machine, combined	May 20, 1862.
34,949	Dutton, William H.	Utica, N. Y.	Skates	April 15, 1862.
35,648	Dyer, Elbridge G., assignor to Owens, Lane, Dyer & Co.	Hamilton, Ohio	Threshing-machines	June 17, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35, 088	Eads, James B	St. Louis, Mo	Vessels, war, turret for	April 29, 1862.
37, 157	Eads, James B	St. Louis, Mo	Propellers, wave, for shallow water	Dec. 16, 1862.
36, 590	Eagle, Robert Nelson	New York, N. Y	Lamps, snuffers for	Sept. 30, 1862.
37, 158	Eagle, Robert Nelson	New York, N. Y	Stirrups, riding	Dec. 16, 1862.
1, 292	Eames, Charles T	Milford, Mass	Boot-trees (Reissue.)	Mar. 25, 1862.
36, 397	Eames, Lovett	Kalamazoo, Mich	Hydraulic apparatus	Sept. 9, 1862.
36, 398	Eames, Lovett	Kalamazoo, Mich	Water engine	Sept. 9, 1862.
36, 562	Earle, George	Dover, Ohio	Harness, &c., process for forming leather straps for	Sept. 30, 1862.
36, 994	Earle, John E., assignor to himself and G. S. Lester	New Haven, Conn	Clothes frame	Nov. 25, 1862.
35, 307	Earnest, William H	Clarksburg, Va	Cradles	May 20, 1862.
1, 518	Earnshaw, John B	Cincinnati, Ohio	Monument (Design.)	Jan. 21, 1862.
36, 343	Easland, John B	Bridgeport, Conn	Cars, railroad passenger, settees for	Sept. 2, 1862.
34, 201	Easterbrook, M., and J. M. Wood	Geneva, N. Y	Willow, machines for peeling	Jan. 21, 1862.
1, 337	Easterbrook, M., and J. M. Wood, assignor to themselves and E. A. Bronson.	Geneva, N. Y	Willows, machines for peeling (Reissue.)	Sept. 2, 1862.
34, 548	Easterly, James, assignor to himself and Dennis G. Littlefield.	Albany, N. Y	Stoves	Feb. 25, 1862.
	Eastman, Harry, *et al.* (*See* Pratt, William E., assignor.)			
36, 605	Easton, C. E	Cedarville, N. Y	Fences	Oct. 7, 1862.
36, 286	Eaton, Asahel K	New York, N. Y	Soap, manufacture of	Aug. 26, 1862.
37, 159	Eaton, Gilbert C., and Samuel W. Turner	Cleveland, Ohio	Gun, centrifugal	Dec. 16, 1862.
35, 145	Eaton, James	Boston, Mass	Spinning, spindles for	May 6, 1862.
	Eaton, Richard, and Joseph Marks. (*See* Marks & Eaton.)			
34, 674	Ebbitt, William	New York, N. Y	Car-axles, boxes for	Mar. 18, 1862.
	Eckel, John J. (*See* Randel, A., assignor.)			
	Eckel, John J. (*See* Schuyler, Israel S., assignor.)			
	Eckel, John J. (*See* Randel, A., assignor. Reissue.)			
34, 108	Eckerson, Adam, and J. H. Reury	Pleasant Brook, N. Y	Washing machine	Jan. 7, 1862.
34, 354	Eckerson, O. D., and C. Watson	Middleburg, N. Y	Water elevators	Feb. 11, 1862.
37, 090	Eddy, A. G	Ashfield, Mass	Churns	Dec. 9, 1862.
	Eddy, Charles, & Co. (*See* Norton, Marcus P., assignor.)			
	Eddy, Charles, & Co. (*See* Hyde, James R., assignor.)			
1, 300	Eddy, Henry	North Bridgewater, Mass	Cribs for horses (Reissue.)	April 8, 1862.
36, 287	Eddy, Henry	North Bridgewater, Mass	Cribs for horses	Aug. 26, 1862.
	Edgerton, Henry. (*See* Hope, Thomas, assignor.)			
35, 089	Edge, Isaac, and Charles C. Hyde	Jersey City, N. J	Signals, night, mode of firing	April 29, 1862.
34, 137	Edgecomb, Joseph	Worcester, Mass	Boring machines	Jan. 14, 1862.
35, 997	Edick, J. A	Newfane, N. Y	Sawing wood, machine for	July 29, 1862.
36, 771	Edson, Ambler	Cambridge, Ill	Washing machine	Oct. 8, 1862.
35, 146	Edson, Jacob	Boston, Mass	Gas-regulators	May 6, 1862.
	Edwards, A. F. W., and Thomas A. Timmins. (*See* Timmins & Edwards.)			
34, 675	Edwards, E., and Joel Cowes, jr	Keene, N. H	Chair backs, machines for cutting	Mar. 18, 1862.
	Edwards, Edmund, *et al.* (*See* Morgan, Jay, Edwards & Tilston.)			
34, 246	Edwards, O. L., and Nelson Gabel	Gratis, Ohio	Fences	Jan. 28, 1862.
36, 772	Eggleston, Leonard	Battle Creek, Mich	Bags with grain, mode of filling	Oct. 28, 1862.
34, 635	Ehlers, John D., and James P. Herron	Baltimore, Md	Pantaloons	Mar. 11, 1862.
35, 368	Ehrman, Samuel	Mount Joy, Pa	Fastenings, shutter	May 27, 1862.
1, 524	Elderweisser, John, and Edward Kettler	Cincinnati, Ohio	Stove (Design)	Feb. 11, 1862.
	Eidlitz, Leopold. (*See* Poitevin, Alphonse L., assignor.)			
34, 821	Eikenberry, Lewis	Philadelphia, Pa	Valves, variable cut-off	April 1, 1862.
34, 822	Eikenberry, Lewis	Philadelphia, Pa	Valves of steam-engines, device for operating	April 1, 1862.
34, 714	Ekin, Jno., assignor to himself and William and S. M. Allison	Xenia, Ohio	Furnaces	Mar. 18, 1862.
36, 051	Ekin, John, assignor to himself and William Allison	Xenia, Ohio	Boilers, steam	July 29, 1862.
	Elder, John. (*See* Young, Thomas J., assignor.)			
	Elder, John, jr., *et al.* (*See* Stiven, James M., assignor.)			
34, 122	Ellicott, James P	Washington, D. C	Refrigerator	Jan. 7, 1862.
35, 284	Elliot, William H	Plattsburg, N. Y	Fire-arms, breech-loading	May 13, 1862.
35, 285	Elliot, William H	Plattsburg, N. Y	Battery, submarine, connected with a boat or other vessel, operating a.	May 13, 1862.
	Elliot, W. H., and John W. Moore. (*See* Moore & Elliot.)			
35, 872	Elliot, William H	Plattsburg, N. Y	Cartridge, patched	July 15, 1862.
34, 885	Elliott, King H	Eden, Vt	Clothes-wringing machines	April 8, 1862.
36, 607	Ellis, G. W., and C. W. Glidden	Stoneham, Mass	Boots and shoes, machines for attaching heels to, and polishing the same.	Oct. 7, 1862.
34, 247	Ellis, John	Detroit, Mich	Gates, carriage	Jan. 28, 1862.
37, 038	Ellis, John	Detroit, Mich	Latches, gate	Nov. 25, 1862.
34, 296	Ellis, J. H	Brooklyn, Pa	Mills for crushing apples, sugar-cane, &c	Feb. 4, 1862.
36, 945	Ellis, John L	Concord, Ill	Cultivators	Nov. 18, 1862.
1, 653	Ellis, Salathiel	Montorville, Minn	Medallion of President Lincoln (Design)	Aug 26, 1862.
36, 288	Ellis, William M. and Jonas B	Washington, D. C	Boilers, steam	Aug. 26, 1862.
36, 015	Ellmaker, William, and C. Hurst	Earl Township, Pa	Carriage-brake	April 22, 1862.
36, 645	Ellwell, Henry H	South Norwalk, Conn	Locks	Oct. 14, 1862.
34, 626	Ely, Alfred B	Newton, Mass	Shot, chain, for ordnance	Mar. 11, 1862.
	Ely, Edwin S. (*See* Isbell, Charles W., assignor.)			
	Ely, Joseph O. (*See* Ulmer, Philip, assignor.)			
	Ely, Joseph O. (*See* Ulmer, Philip, assignor.)			
	Emanuel, Morgan, jr., and Wm. R. Thomas. (*See* Thomas & Emanuel.)			
	Emanuel, M., jr., and W. R. Thomas. (*See* Thomas & Emanuel.)			
37, 194	Emerson, James, assignor to William P. Hunt	Manchester, N. H	Windlass, ships'	Dec. 16, 1862.
36, 209	Emerson, J. E	Trenton, N. J	Bayonets, steel scabbard for	Aug. 19, 1862.
	Emerson, James E., and James C. Stock. (*See* Stock & Emerson.)			
1, 304	Emerson, James E	Trenton, N. J	Tools to their handles, mode of fastening (Reissue)	April 29, 1862.
34, 180	Emerson, Ralph, jr., and F. Graham, assignors to Ralph Emerson, jr.	Rockford, Ill	Mowing machines	June 14, 1862.
34, 181	Emerson, Ralph, jr., and F. Graham, assignors to Ralph Emerson, jr.	Rockford, Ill	Harvesters	Jan. 14, 1862.
	Emerson, Rufus H. (*See* Martine, Charles F., assignor.)			
	Emerson, Sam'l P., and Jno. Dean. (*See* Dean & Emerson.)			
36, 458	Emerson, Simeon F	Seville, Ohio	Clothes-wringing machine	Sept. 16, 1862.
36, 773	Emery, A. H	New York, N. Y	Projectiles for rifled ordnance	Oct. 28, 1862.
	Emery, H. C., and D. B. Neal. (*See* Neal & Emery.)			
37, 160	Engle, William S	Brooklyn, N. Y	Tactics, military, apparatus for teaching	Dec. 16, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	English, Bennett, Frisbee & Crawford. (*See* Crawford, Benjamin, assignor.)			
	English, J. W. (*See* Thomas, H. B., assignor.)			
35,308	English, N. F	Hartland, Vt	Photographic apparatus	May 20, 1862.
	Ensign, Edward H., *et al.* (*See* Wilcox, John W., assignor.)			
35,594	Ensign, Lemuel	Millburn, N. Y	Mills, fanning	June 17, 1862.
35,972	Ensign, William F., assignor to James Willcox	Lansingburg, N. Y	Sewing machines, felling guide for	July 22, 1862.
36,081	Ernst, John G	York, Pa	Bayonet guard, removable	Aug. 5, 1862.
37,222	Ernst, John G	York, Pa	Bayonet scabbard and guard	Dec. 23, 1862.
34,745	Ernst, Otto	New York, N. Y	Tobacco pipes	Mar. 25, 1862.
35,747	Ernst, Otto	New York, N. Y	Extracting essences, vessel for	July 1, 1862.
35,926	Ernst, Otto	New York, N. Y	Tobacco pipes	July 22, 1862.
36,143	Ernst, Otto	New York, N. Y	Barrels of beer and other liquids, apparatus for giving vent to.	Aug. 12, 1862.
	Estabrooks, Wm. B., *et al.* (*See* Shaw, Estabrooks & Piper.)			
36,210	Etter, Samuel, and R. B. Neuman	Fayetteville, Pa	Washing machine	Aug. 19, 1862.
34,248	Evans, George F	Norway, Me	Piano stocks	Jan. 28, 1862.
37,143	Evans, George G	Philadelphia, Pa	Straps, shoulder, for officers	Dec. 9, 1862.
35,511	Evans, Henry, jr	Baltimore, Md	Steaming oysters, apparatus for	June 10, 1862.
36,234	Evans, Joseph	Newark, N. J	Fruit-gatherers	Nov. 4, 1862.
34,823	Evans, Joseph P	Hazleton, Pa	Boilers, steam	April 1, 1862.
	Evans, Nathaniel, jr. (*See* Ames, Nathan, assignor.)			
1,626	Evans, Thomas W	Philadelphia Pa	Trade-mark (Design)	Dec. 16, 1862.
37,161	Evans, William B	Holderness, N. H	Knitting machines	Dec. 16, 1862.
35,927	Eveland, Josiah	Elizabeth City, N. J	Turning irregular forms, machines for	July 22, 1862.
36,774	Eveland, Josiah	Elizabeth City, N. J	Wheels, felloes of, mode of connecting	Oct. 28, 1862.
35,560	Everett, J. Edward, assignor to W. Everett & Co	Dedham, Mass	Wringing machines	June 10, 1862.
	Everett, Willard & Co. (*See* Guild, Lewis, assignor.)			
36,255	Everitt, Sheldon B., assignor to The Thomas Manufacturing Company.	Plymouth Hollow, Conn	Knife handles	Aug. 19, 1862.
	Failor, A. J., and A. W. Brinkerhoff. (*See* Brinkerhoff & Failor.)			
	Fairbanks, Joseph A. (*See* Wait, Windsor B., assignor.)			
34,355	Fairbanks, Thaddeus	St. Johnsbury, Vt	Weighing apparatus	Feb. 11, 1862.
34,417	Fairbanks, Thaddeus	St. Johnsbury, Vt	Scales, platform	Feb. 18, 1862.
34,676	Fairbanks, Thaddeus	St. Johnsbury, Vt	Scales, platform	Mar. 18, 1862.
34,396	Fairchild, L. S., assignor to himself, Alonzo Hazen, Alonzo M. Hazen, and A. J. Whiting.	Cleveland, Ohio	Shingle machines	Feb. 11, 1862.
35,561	Fairchild, John H., assignor to himself and C. P. Stimets	Highgate, Vt	Sugar, maple, sap bucket for the manufacture of	June 10, 1862.
35,589	Falke, Oscar	New York, N. Y	Rubber, hard, compound	June 17, 1862.
	Fancher, W. H., and C. M. French. (*See* French & Fancher.)			
	Fanning, Thos. C., *et al.* (*See* Wilcox, John W., assignor.)			
34,109	Fanshawe, John A., and James A. Jaques	Tottenham, England	Brush	Jan. 7, 1862.
35,515	Fanshawe, J. A., and J. A. Jaques	Tottenham, England	Steam-generator	June 17, 1862.
36,289	Faries, Henry V	Indianapolis, Ind	Wrenches, pipe	Aug. 26, 1862.

35,596	Farmer, George P	Philadelphia, Pa	Needles, sewing, envelopes for	June 17, 1862.
35,748	Farmer, George P	Philadelphia, Pa	Needles into paper, machinery for sticking	July 1, 1862.
34,418	Farmer, Henry	Pontiac, Mich	Vegetable and root-cutter	Feb. 18, 1862.
34,506	Farmer, Gabriel	Marion, Pa	Tires, apparatus for bending	Feb. 25, 1862.
35,090	Farnsworth, Jonas	Lewiston, Me	Window-washer	April 29, 1862.
	Farquhar, A. B., and W. W. Dingee. (*See* Dingee & Farquhar.)			
	Farrar, Thomas, *et al.* (*See* Streeter, Alonzo, assignor.)			
	Farrel, Franklin. (*See* Doolittle, J. H., assignor.)			
	Farrel, Franklin, and A. B. Hendryx. (*See* Hendryx & Farrel.)			
36,946	Farrel, John	New York, N. Y	Locks	Nov. 18, 1862.
34,858	Farrell, Joseph O., assignor to himself and William Veazey	Boston, Mass	Wagon springs	April 1, 1862.
35,017	Farrell, Joseph O	New York, N. Y	Vehicles, wheel	April 22, 1862.
36,144	Fasig, Daniel	Rowsburg, Ohio	Jack, lifting	Aug. 12, 1862.
34,356	Fasig, J	West Salem, Ohio	Hay knives	Feb. 11, 1862.
	Faulkner, John, and Ashman Hall. (*See* Hall & Faulkner.)			
36,344	Fay, Benjamin W	Boston, Mass	Hats, sweats for	Sept. 2, 1862.
35,597	Fay, Lyman	Fall River, Mass	Railroad joints, mode of securing	June 17, 1862.
35,973	Feezler, Stephen M., assignor to himself, Van R. Stuck, and Samuel Thomas.	Seneca Falls, N. Y	Horse-powers	July 22, 1862.
34,824	Felsing, Jacob	Granville, Wis	Separators, grain	April 1, 1862.
36,121	Fenning, James, assignor to himself and James S. Taylor	Danbury, Conn	Boots and shoes, "coasting guard" for	Aug. 5, 1862.
36,052	Ferren, A. C., assignor to himself and F. M. Clark	Decorah, Iowa	Separating oats from wheat, screens for	July 29, 1862.
37,254	Firth, Thos. T., assignor to himself and Benj. L. Woolston	Camden, N. J	Churns	Dec. 23, 1862.
35,438	Field, B. F	Sheboygan Falls, Wis	Seeding machines	June 3, 1862.
35,512	Fiester, John U	Winchester, Ohio	Cooking apparatus	June 10, 1862.
	Fifield, Charles H., and William B. Kehew. (*See* Kehew & Fifield.)			
34,747	Finch, James R., and Thomas W. Henderson	Dayton, Ohio	Seeding machines	Mar. 25, 1862.
1,369	Finkau, Gustavus	Brooklyn, N. Y	Sugar, cube, apparatus for manufacturing (Reissue)	Feb. 4, 1862.
36,899	Finkle, Milton	New York, N. Y	Sewing machines	Nov. 11, 1862.
34,677	Firmenich, Joseph	Buffalo, N. Y	Dermopathic instruments	Mar. 18, 1862.
37,037	Firth, John, and John Ingham	Phillipsburg, Pa	Pipes, cast-iron, flasks for	Dec. 2, 1862.
34,746	Fischer, Adam and William	New York, N. Y	Marble, imitation	Mar. 25, 1862.
34,357	Fish, Warren L	Newark, N. J	Sewing, guides for creasing tucks and plaits preparatory to	Feb. 11, 1862.
35,598	Fish, W. L	Newark, N. J	Lamp chimneys, attachment to	June 17, 1862.
1,368	Fish, Warren L	Newark, N. J	Lamp chimneys (Reissue)	Dec. 23, 1862.
34,182	Fishel, Marks, assignor to himself and Adolph Opper and Leo Popper	New York, N. Y	Skirts, skeleton	Jan. 14, 1862.
35,224	Fisher, A. S	Millville, N. Y	Weather strips	May 13, 1862.
36,264	Fisher, Henry S	Newburg, Pa	Cans, preserve	Aug. 19, 1862.
34,678	Fisk, Joseph E	Salem, Mass	Gas-metres, dry	Mar. 18, 1862.
34,053	Fiske, D. A	Milwaukie, Wis	Lamp, vapor	Jan. 7, 1862.
34,715	Fisler, Thomas, assignor to J. B. Reed	Camden, N. J	Feed-bags	Mar. 18, 1862.
36,145	Fisler, Thomas	Camden, N. J	Washboard, circular	Aug. 12, 1862.
	Fitch, John. (*See* Foy, Patrick, assignor.)			
34,627	Fitch, O. F	Morristown, Ind	Can, fruit	Mar. 11, 1862.
34,138	Fitton, James	Cavendish, Vt	Carding machines	Jan. 14, 1862.
36,082	Fitts, Robert, jr	Fitchburg, Mass	Wood, machinery for bending	Aug. 5, 1862.
36,398	Fitts, R. B	Philadelphia, Pa	Treating night soil	Sept. 9, 1862.
34,569	Fitzgerald, Daniel	New York, N. Y	Tents	Mar. 4, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
37,195	Fitzgerald, Daniel, assignor to himself and Chas. B. Tatham	New York, N. Y	Hydraulic cylinders	Dec. 16, 1862.
35,749	Fitzgerald, Walter	Salem, Mass	Pegging-machines	July 1, 1862.
34,902	Flansburgh, John D	Philadelphia, Pa	Pot, culinary	Jan. 21, 1862.
35,225	Flechet, Paul	Paris, France	Sun-dials	May 13, 1862.
34,139	Flenniken W. W	Colony, Ia	Water-wheel	Jan. 14, 1862.
35,091	Fletcher, Henry	London, England	Crinoline clips	April 29, 1862.
35,928	Fletcher, Hiram C	Eden, Vt	Roots, machine for cutting	July 22, 1862.
35,276	Fleury, Anthony L., and Charles Adams, assignors to Waldron J. Cheyney	Philadelphia, Pa	Iron and steel, manufacture of	May 13, 1862.
36,737	Flint, Joseph	Rochester, N. Y	Trowels, plastering	Oct. 21, 1862.
35,750	Flower, D	Geneva, N. Y	Paper, wall, machine for trimming	July 1, 1862.
1,311	Floyd, James R	New York, N. Y	Safes, burglar-proof (Reissue.)	May 27, 1862.
35,601	Fobes, D., and H. M. Hartshorn	Boston, Mass	Fire-ladder apparatus	June 17, 1862.
	Follett, Jesse. (*See* Dillingham, John, assignor.)			
	Folsom, Abraham, & Son. (*See* Foyer, David, assignor.)			
	Folsom, Abraham, & Son. (*See* Foyer, David, assignor. Design.)			
	Folsom, Abraham, & Son. (*See* Foyer, David, assignor. Design.)			
1,602	Folsom, J. G., and B. D. Whitney, assignors to J. G. Folsom	Winchendon, Mass	Sewing-machine frame (Design.)	June 3, 1862.
35,147	Ford, Elias T	Stillwater, N. Y	Plough-beam	May 6, 1862.
35,513	Ford, Frederick G	New York, N. Y	Window-sash	June 10, 1862.
	Forsythe, Samuel, and J. R. Williamson. (*See* Williamson & Forsythe.)			
	Forsythe, Samuel, and J. R. Williamson. (*See* Williamson & Forsythe.)			
37,162	Fosdick, George W., and John Crawford	Downgiac, Mich	Threshing and hulling clover-seed, machines for	Dec. 16, 1862.
37,223	Fosdick, John F	Lowell, Mass	Looms	Dec. 23, 1862.
	Foskett, W. A., and Samuel F. Gold. (*See* Gold & Foskett.)			
34,484	Foss, Ephraim D	Maineville, Ohio	Saccharine juices, evaporating pans for	Feb. 25, 1862.
35,929	Foster, J. Heron	Pittsburg, Pa	Type, movable, to cylindrical surfaces, attaching	July 22, 1862.
34,679	Foster, Wm. A	Fitchburg, Mass	Valves, cut-off, means of operating	Mar. 18, 1862.
34,327	Fournier, F. B., assignor to self and Robert Wallace	Berea, Ohio	Drain roller and moulder combined	Feb. 4, 1862.
36,947	Foust, J. W	Hammondsburg, Pa	Hay-loading machines	Nov. 18, 1862.
35,148	Fowlds, Thomas	Trevorton, Pa	Ordnance	May 6, 1862.
1,341	Fowler, F. F	Crane Township, Ohio	Elevators, hay (Reissue.)	Sept. 9, 1862.
35,226	Fowler, Henry A	Afton, N. Y	Dresses, ladies', instrument for draughting	May 13, 1862.
1,576	Fowler, Henry A	Afton, N. Y	Hames, fastening (Design.)	May 13, 1862.
35,227	Fowler, James S	Peoria, Ill	Corn-sheilers	May 13, 1862.
35,649	Fowler, Merwin, assignor to Edward Miller	Meriden, Conn	Lamp-chimneys, spring-catch for	June 17, 1862.
34,358	Fowler, Thaddeus	Richmond Valley, N. Y	Vessels, deck, ballast-boxes for	Feb. 11, 1862.
35,930	Foy, Lavinia H	Worcester, Mass	Skirt, corset, supporters	July 22, 1862.
34,661	Foy, Patrick, assignor to self and John Fitch	New York, N. Y	Cannon, apparatus for boring and rifling	Mar. 11, 1862.
1,577	Foyer, David, assignor to Abraham Folsom & Son	Dover, N. H	Floor-cloth pattern (Design.)	May 13, 1862.
1,677	Foyer, David, assignor to Abraham Folsom & Son	Dover, N. H	Floor-cloth pattern (Design.)	Dec. 9, 1862.

1,695	Foyer, David, assignor to Abraham Folsom & Son	Dover, N. H	Floor cloths, &c., pattern of (Design)	Dec. 16, 1862.
35,514	Fradgley, William	Greenbush, N. Y	Cork-screw	June 10, 1862.
35,149	Francis, Lewis, and F. W. Letmate	New York, N. Y	Composition for making printers' inking rollers	May 6, 1862.
34,249	Francis, Samuel W	New York, N. Y	Match-box, pocket	June 28, 1862.
	Franck, Fred'k, and Jno. A. Tauber. (*See* Miller, Julius J., assignor.)			
35,998	Franke, Bernhard	New York, N. Y	Ordnance, revolving	July 29, 1862.
34,203	Franklin, Bradley W	New York, N. Y	Gauge, fusible, for temperature	Jan. 21, 1862.
36,146	Franklin, Bradley W	New York, N. Y	Heaters or boilers, vulcanizing	Aug. 12, 1862.
36,513	Franklin, Bradley W	New York, N. Y	Teeth to artificial base, securing	Sept. 23, 1862.
34,570	Franklin, Francis B	Appleton, Wis	Bed bottoms, spring	Mar. 4, 1862.
34,749	Fraser, D. R	Chicago, Ill	Pistons, packing for	Mar. 25, 1862.
34,997	Fraser, D. R., assignor to himself, P. W. Gates, and Thos. Chalmers.	Chicago, Ill	Valves for steam-engines	April 15, 1862.
35,439	Fraser, D. R	Chicago, Ill	Piston packing	June 3, 1862.
	Fraser, David R., *et al.* (*See* Hedges, Wheeler, assignor. Reissue.)			
	Fraser, David R., *et al.* (*See* Hedges, Wheeler, assignor. Reissue.)			
	Fraser, David R., *et al.* (*See* Hedges, Wheeler, assignor. Reissue.)			
	Fraser, David R., *et al.* (*See* Hedges, Wheeler, assignor. Reissue.)			
	Fraser, D. R., *et al.* (*See* Gates, P. W., assignor.)			
36,563	Frazer, John P	New York, N. Y	Fastenings for chamber doors	Sept. 30, 1862.
35,150	Frazer, Kasson	Syracuse, N. Y	Buckles, rings, &c	May 6, 1862.
34,483	Fredenbarr, J. G., and J. L. George	Columbia, Cal	Water-wheel	Feb. 25, 1862.
34,951	Freeman, Albert A	Philadelphia, Pa	Sewing-thread spool-holders, portable	April 15, 1862.
37,091	Freeman, A. T	Binghampton, N. Y	Fire-arms, revolving	Dec. 9, 1862.
35,814	Freese, J. A	Hanover, Ohio	Planters, corn	July 8, 1862.
35,369	French, A. H	Pittsfield, Ill	Water-elevators	May 27, 1862.
34,952	French, Carlos	Seymour, Conn	Car springs, spiral, corrugated	April 15, 1862.
	French, Chas. M., and A. McKissick. (*See* McKissick & French.)			
36,600	French, C. M., and W. H. Francher	Waterloo, N. Y	Plough and gun, combined	June 17, 1862.
	French, D., and J. Clarke. (*See* Clarke & French.)			
37,163	French, James M	East Cambridge, Mass	Bedstead	Dec. 16, 1862.
35,731	French, Samuel, assignor to himself and Sidney Allen	Boston, Mass	Pockets, safety	June 24, 1862.
36,646	Fretz, Samuel	Buckeye, Ohio	Seed dropping device, hand	Oct. 14, 1862.
36,400	Friese, Louis	Stuttgardt, Germany	Saddles, riding	Sept. 9, 1862.
35,602	Frink, Christopher L	Rockville, Conn	Shuttles, weavers'	June 17, 1862.
	Frisbee, English, Bennett, and Crawford. (*See* Crawford, Benj., assignor. Reissue.)			
36,290	Fritschler, Wm. O. C	Brooklyn, N. Y	Weighing apparatus	Aug. 26, 1862.
35,732	Frohlich, W., assignor to Morris Richter	Harburgh, Hanover	Mattress	June 24, 1862.
1,568	Frost, Charles H	Peekskill, N. Y	Stove, cooks' (Design)	April 29, 1862.
35,440	Frost, Charles H	Peekskill, N. Y	Heaters	June 3, 1862.
35,228	Frost, Edward	Georgetown, D. C	Car-trucks	May 13, 1862.
34,998	Frost, Francis N., assignor to himself and Henry Haskins	New Britain, Conn	Coal-sifters	April 15, 1862.
1,280	Frost, Issachar, and James Monroe, assignors by mesne assignments to Alexander Swift.	Cincinnati, Ohio	Flour from bran, mode of separating (Reissue)	Feb. 25, 1862.
34,963	Frost, Pinckney	Springfield, Vt	Scythe snaths	April 8, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35, 441	Fryatt, Horatio N	Belleville, N. J	Filtering liquids, centrifugal machine for	June 3, 1862.
34, 419	Fuller, Albert	Cincinnati, Ohio	Faucets	Feb. 18, 1862.
	Fuller, Luther N. (*See* Barber, Ira S., assignor.)			
	Fuller, Warren & Co. (*See* Hathaway, David, assignor.)			
	Fuller, Warren & Co. (*See* Hathaway, David, assignor.)			
34, 297	Fulton, William	Elizabeth City, N. J	Cooking apparatus	Feb. 4, 1862.
34, 884	Fulton, William	Elizabeth City, N. J	Lamp chimneys, fastener for	April 8, 1862.
35, 151	Fulton, William	Elizabeth City, N. J	Lamp cone, coal-oil	May 6, 1862.
35, 370	Fulton, William	Cranberry, N. J	Burners, coal-oil	May 27, 1862.
37, 092	Fulton, William	Elizabeth, N. J	Cooking apparatus	Dec. 9, 1862.
35, 092	Funk, Elliott H	Newark, Ohio	Saccharine juices, evaporater for	April 29, 1862.
36, 948	Furnas, B. and C	Quonwa, Iowa	Cultivators	Nov. 18, 1862.
34, 232	Furness, Willard H	Quincy, Ill	Varnishes, coach and furniture	Jan. 21, 1862.
34, 953	Furst, Conrad, David Bradley, and John Lacey	Chicago, Ill	Rakes, horse	April 15, 1862.
35, 093	Gabel, Lucian	Richmond, Ind	Sword and pistol, combined	April 29, 1862.
	Gabel, Nelson, and O. L. Edwards. (*See* Edwards & Gabel.)			
	Gage, Campbell & Gage. (*See* Kavanaugh, Luke, ass'r.)			
	Gage, George and George C. (*See* Campbell, Geo., ass'r.)			
36, 608	Gage, James P., and John C. Gilbert	New York, N. Y	Asparagus plant, utilizing the products of the	Oct. 7, 1862.
34, 955	Gage, John S., and P. D. Beckwith	Dowagiac, Mich	Seeding machines	April 15, 1862.
36, 291	Gage, John S	Dowagiac, Mich	Drills, grain, seed coverers for	Aug. 26, 1862.
	Gahagan, Henry V. (*See* Carpenter, Hiram, assignor.)			
36, 996	Gale, Elbridge	Kendall, Ill	Fences, portable	Nov. 25, 1862.
34, 825	Gallacher, John McAuley	Roxbury, Mass	Fertilizing composition	April 1, 1862.
36, 514	Gallagher, H. N	Geneva, N. Y	Water-wheels	Sept. 23, 1862.
35, 733	Gallagher, John, assignor to himself, Christopher Dorflinger, Anson Judson, and Antoine Regan.	Brooklyn, N. Y	Lamps, lighting and trimming	June 24, 1862.
36, 292	Gallahue, A. C	Katonat, N. Y	Pegging boots and shoes, machine for	Aug. 26, 1862.
34, 080	Galvin, Michael	Scranton, Pa	Tenoning machines, hand	Mar. 18, 1862.
35, 873	Galvin, Michael	Wilksbarre, Pa	Tenoning machines, hand	July 15, 1862.
	Gance, D., *et al.* (*See* Derocquigny, Gance & Hanzo.)			
36, 401	Ganster, George P	New York, N. Y	Ordnance, breech-loading	Sept. 9, 1862.
35, 982	Garber, Ferdinand, and Sylvanus Shimer	Terre Haute, Ind	Scrapers, dirt	July 22, 1862.
37, 224	Gardiner, Henman	New York, N. Y	Churns	Dec. 23, 1862.
34, 750	Gardner, Daniel S., and N. A. Manning	Greene, N. Y	Presses for compressing and baling	Mar. 25, 1862.
36, 835	Gardner, Francis	Roxbury, Mass	Canteen	Nov. 4, 1862.
	Gardner, G. H., and L. O. Colvin. (*See* Colvin & Gardner.)			
35, 416	Gardner, Henry K., assignor to self and Adam J. Glossbrener.	York, Pa	Telegraph pneumatic	May 27, 1862.
37, 223	Gardner, J. W	Shelburne Falls, Mass	Cutlery, attaching handles to	Dec. 23, 1862.
24, 054	Gardner, M. C	Huntington Co., Ind	Mill, stone-dressing	Jan. 7, 1862.
37, 093	Gardner, Smith, and A. B. Howe	New York, N. Y	Rice cleaning	Dec. 9, 1862.
37, 094	Gardner, William	New York, N. Y	Bedstead, metallic folding	Dec. 9, 1862.
33, 909	Garel, J. H., assignor to self and J. B. Thompson	Philadelphia, Pa	Railway, city tracks	July 15, 1862.
36, 773	Garlinghouse, George B. and Cyrus B	Adamsville, Ind	Harvesters	Oct. 28, 1862.

35, 229	Garretson, Joel C. and Ames P	Jackson Township, Ia	Looms	Mar. 13, 1862.
36, 211	Garrison, C. O	East Saginaw, Mich	Salt, apparatus for the manufacture of	Aug. 12, 1862.
	Garrison, S. A., and G. T. Pearsall. (*See* Pearsall & Garrison.)			
34, 296	Garvey, Benjamin	Ashland, N. Y	Position and direction on land and sea, ascertaining	Feb. 4, 1862.
37, 165	Garvy, Samuel P	Oshkosh, Wis	Gearing for machinery	Dec. 16, 1862.
36, 605	Gaskill, Roland R	Wyanet, Ill	Cultivators	Oct. 7, 1862.
	Gates, Jos. R., and Ed P. Smith. (*See* Smith & Gates.)			
	Gates, P. W., *et al.* (*See* Frazer, D. R. assignor. Reissue.)			
	Gates, P. W., *et al.* (*See* Hedges, Wheeler, ass'or. Reissue.)			
	Gates, P. W., *et al.* (*See* Hedges, Wheeler, ass'or. Reissue.)			
	Gates, P. W., *et al.* (*See* Hedges, Wheeler, ass'or. Reissue.)			
	Gates, P. W., *et al.* (*See* Hedges, Wheeler, ass'or. Reissue.)			
36, 881	Gates, P. W., assignor to self, Thomas Chalmers & D. R. Fraser.	Chicago, Ill	Saccharine liquids, evaporating pans for	Nov. 4, 1862.
36, 949	Gates, P. W	Chicago, Ill	Saccharine liquids, apparatus for evaporating	Nov. 18, 1862.
36, 402	Gatling, Richard J	Indianapolis, Ind	Ram, marine steam	Sept. 9, 1862.
36, 536	Gatling, Richard J	Indianapolis, Ind	Gun battery, revolving	Nov. 4, 1862.
	Gaudee, John. (*See* Orpen, Charles N., assignor.)			
34, 628	Gault, John	Boston, Mass	Shot, chain, for ordnance	Mar. 11, 1862.
35, 734	Gault, John, assignor to self and W. V. Barkalow	Boston, Mass	Shot, chain	June 24, 1862.
1, 627	Gault, John	Boston, Mass	Postage-stamp case (Design.)	Aug. 12, 1862.
35, 675	Gaylord, Edwin S	Hartford, Conn	Lamps, mica chimneys for	June 24, 1862.
	Gaylord, William M. (*See* Stowell, Charles, assignor.)			
	Geddes, Alex., and J. W. and Wm. Mentzel. (*See* Mentzel & Geddes.)			
35, 999	Gedney, George W. B	New York, N. Y	Fire-arms, revolving	July 29, 1862.
34, 826	Gee, William	New York, N. Y	Soda-water apparatus	April 1, 1862.
35, 815	Geiss, J. J. Brosius, and W. P. Penn	Belleville, Ill	Harvesters	July 8, 1862.
	Geiss, Jacob, *et al.* (*See* Penn, Geiss & Brosius.)			
34, 462	Gengembre, H. P., assignor to George W. Howard	Farrentum, Pa	Method of storing oil	Feb. 18, 1862.
36, 902	Gentil, Constant	New York, N. Y	Bed spring	Nov. 11, 1862.
35, 603	Genning, Melvin A	Granville, Ohio	Bell, door and burglar alarm	June 17, 1862.
	George, J. L., and J. G. Fredenburr. (*See* Fredenburr & George.)			
34, 866	George, Robert W	Richmond, Me	Washing machine	April 8, 1862.
	Germon, W. L. (*See* Scott, Edward R., assignor.)			
36, 212	Getz, Charles Louis	Philadelphia, Pa	Pantographic reversing instrument	Aug. 19, 1862.
34, 827	Gibb, Wm., and R. J. Bell	Carlisle, Pa	Clothes wringer	April 1, 1862.
	Gibbs, Dalphon L., and Edw'd Joslin. (*See* Joslin & Gibbs.)			
1, 636	Gibbs, Samuel W	Albany, N. Y	Stoves, plates of (Design.)	Sept. 23, 1862.
1, 637	Gibney, F. H	New York, N. Y	Spoon and fork handle (Design.)	Sept. 23, 1862.
34, 831	Gibson, A. J	Worcester, Mass	Lamps, coal-oil, burners for	April 1, 1862.
	Gibson, Frederick M., and Benj. Merritt. (*See* Merritt & Gibson.)			
35, 515	Gibson, John, and Michael Heberger	Cincinnati, Ohio	Hydrants	June 10, 1862.
33, 230	Gibson, William	Fort Wayne, Ind	Fences	May 13, 1862.
	Gifford, E. M. (*See* Sanborn, Jubal M., assignor.)			
	Gifford, E. M., *et al.* (*See* Peck, Royal H., assignor.)			
34, 681	Gilbert, Daniel	Middlefield, N. Y	Vehicles, wheel	Mar. 18, 1862.
34, 110	Gilbert, George W	Bettsville, Ohio	Churns	Jan. 7, 1862.
	Gilbert, Jno. C., and Jas. P. Gage. (*See* Gage & Gilbert.)			

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
37,255	Giles, John S., Wm. Halladay, and Jno. A. Rue, assignors to Jno. S. Giles and Wm. Halladay.	New York, N. Y.	Hats, apparatus for pressing	Dec. 23, 1862.
36,647	Gilfillan, William	Syracuse, N. Y.	Gates, devices for closing	Oct. 14, 1862.
35,018	Gill, Howard	Dedham, Mass	Bedsteads, folding	April 22, 1862.
35,199	Gill, H. B., assignor to Erastus Tarbox	Ogden, N. Y	Apples, machine for packing	May 26, 1862.
35,816	Gill, Joseph	Williamstown, Pa	Washing machine	July 8, 1862.
	Gill, J. M. H., and Wm. Rowan. (*See* Rowan & Gill.)			
34,486	Gill, Jos. R., and Wm. E. Palmer	Alton, Ill	Washing machine	Feb. 25, 1862.
34,610	Gill, Jos. R., W. E. Palmer, and W. W. Webb	Alton, Ill	Clothes-wringer	Mar. 4, 1862.
34,055	Gillespie, James E	Trenton, N. J	Hydraulic governor	Jan. 7, 1862.
36,564	Gillett, R. P	Viroqua, Wis	Axles, wagon	Sept. 30, 1862.
35,905	Gilman, James S	Tecumseh, Mich	Harness rings, clasps for	July 29, 1862.
34,420	Gilman, O. T	Washington, D. C	Tools	Feb. 18, 1862.
36,776	Gilmore, James F	Burton, Ohio	Mill-stones, machine for trimming, staffing and fine dressing of.	Oct. 28, 1862.
37,164	Gingrich, Wm. W., and C. S. Coats	Mexico, Pa	Lock for mail-bag	Dec. 16, 1862.
35,817	Giraudat, A	New York, N. Y	Saws, scroll	July 8, 1862.
34,328	Gird, Edward D., and R. Gird, assignors to themselves and Thomas J. Bedwell.	Cedar Lake, N. Y	Budding knife	Feb. 4, 1862.
36,706	Glasinger, Samuel	Allegheny City, Pa	Brick machines	Oct. 21, 1862.
34,829	Glasgow, Henry C	Chicago, Ill	Cab, brakeman's	April 1, 1862.
	Gleason, Elliott P. (*See* Green, Jerome B., assignor.)			
	Glidden, C. W., and G. W. Ellis. (*See* Ellis & Glidden.)			
	Glidden, Wm. T. (*See* Harper, Louis, assignor.)			
34,830	Glinsdal, Martin T	Madison, Wis	Seeding machines	April 10, 1862.
	Glossbrenner, Adam J. (*See* Gardner, Henry K., assignor.)			
36,610	Glover, Henry	Oxford, Mass	Wind-wheels	Oct. 7, 1862.
34,359	Glyde, Richard C	Pittsburg, Pa	Carbon and other oils, vessels for transportation of	Feb. 11, 1862.
36,707	Goar, John C	Jamaica Plains, Mass	Belt slippers	Oct. 21, 1862.
	Godfrey, B. D. (*See* Brown, Edward, assignor to John W. Piper, assignor.)			
34,682	Godfrey, H. D	Milford, Mass	Boots and shoes, India-rubber	Mar. 18, 1862.
36,515	Godfrey, Cornelius	Brooklyn, N. Y	Fire in the hold of ships, vessels, &c., extinguishing	Sept. 23, 1862.
36,648	Godfrey, Freeman	Grand Rapids, Mich	Stump extractors	Oct. 14, 1862.
35,818	Goewey, John A	Albany, N. Y	Kettles, tea	July 8, 1862.
35,658	Going, Stephen R., assignor to David S. Quimby and David S. Quimby, jr.	Brooklyn, N. Y	Stoves	June 17, 1862.
36,000	Gold, Samuel F., and Wm. A. Foskett	Brooklyn, N. Y	Heating apparatus, steam	July 29, 1862.
34,487	Goldthwait, Charles	South Weymouth, Mass	Clothes drying apparatus	Feb. 25, 1862.
34,050	Gomez, Edwin	New York, N. Y	Cannon by attached fuses, firing	Jan. 7, 1862.
34,037	Gomez, Edwin	New York, N. Y	Trains or fuses, construction of	Jan. 7, 1862.
36,777	Gonzales, Benjamin	Goodland, Ind	Bread making, chest and table for	Oct. 28, 1862.
36,001	Goodrem, Thomas, and Charles Jackson	Providence, R. I	Projectiles, rotating, for smooth-bored ordnance	July 29, 1862.
37,041	Goodrich, Joseph	Mascoda, Wis	Sorghum strippers	Dec. 2, 1862.
34,954	Goodwin, Curtis	New Brunswick, N. J	Cord-winder	April 15, 1862.

34,887	Goodwin, Forman	Astoria, N. J	Traps, fish	April 8, 1862.
	Goodwin, Josiah, and Samuel S. Campbell. (*See* Campbell & Goodwin.)			
34,204	Goodwin, William C	Hamden, Conn	Chair, arm, folding	Jan. 21, 1862.
35,311	Goodwin, William F	Powhatan, Ohio	Ordnance, breech-loading	May 6, 1862.
	Goodyear, Chas., sr., deceased, by Chas. Goodyear, jr., ex'r.	New Haven, Conn	Rubber, India, making hollow articles of..(Extension.)	April 18, 1862.
35,231	Goodyear, Charles, jr	New York, N. Y	Cestors from vulcanizable compounds, manufacture of	May 13, 1862.
	Goodyear, George. (*See* Silverthorn, Newman, assignor. Reissue.)			
34,140	Goodyear, Henry B	New Haven, Conn	Gaiters	Jan. 14, 1862.
	Goodyear, India Rubber Bottle Stopple Co. (*See* Ames, Nathan, assignor.)			
35,931	Goodyear, Robert A	New York, N. Y	Hooks, snap	July 22, 1862.
1,310	Goodyear, Robert B., assignor to James A. Bowie and Charles Carr, assignors to the said Robert B. Goodyear.	Elkton, Md	Looms, apparatus for operating shuttle-boxes of..(Reissue.)	May 20, 1862.
	Goodyear, Robert Burns	Elkton, Md	Looms, shuttle-boxes of, apparatus for operating..(Ext'n.)	Aug. 25, 1862.
36,611	Gordon, Alexander, ass'r to Jas. Brayley and Jno. B. Pitts	Rochester, N. Y	Separators, grain	Oct. 7, 1862.
34,751	Gordon, Edwin	Taunton, Mass	Diggers, rotary	Mar. 25, 1862.
34,111	Gordon, George P	Brooklyn, N. Y	Printing-presses	Jan. 7, 1862.
36,840	Gordon, George P	Brooklyn, N. Y	Printing-presses	Nov. 4, 1862.
36,839	Gordon, James	Caledonia, N. Y	Printing-presses	Nov. 4, 1862.
35,371	Goss, Charles P	St. Johnsbury, Vt	Cultivator and potato-digger	May 27, 1862.
36,778	Gossin, Benjamin F	Cincinnati, Ohio	Railroad rails, joint fastenings for, machines for making	Oct. 28, 1862.
34,421	Gould, Elanson D	Lockport, N. Y	Harness makers, channelling tools for	Feb. 18, 1862.
35,019	Gould, William W	Skowhegan, Me	Ordnance, vent-holes of	April 22, 1862.
	Goulding, John	Worcester, Mass	Wool or other fibrous materials, mode of manufacturing. (Extension.)	Aug. 30, 1862.
36,459	Goulding, William F., and Frank Cheney	Providence, R. I	Presses, drop	Sept. 16, 1862.
35,094	Gove, Andrew J	San Francisco, Cal	Faucets	April 29, 1862.
	Gowdy, J. M., and J. Luccock. (*See* Luccock & Gowdy.)			
	Graham, F., and Ralph Emerson, jr. (*See* Emerson & Graham.)			
	Graham, F., and Ralph Emerson, jr. (*See* Emerson & Graham.)			
34,141	Graicken, William, and C. Hoffman	Clinton, Mass	Looms, power	Jan. 14, 1862.
36,345	Grange, William	Augusta, Ky	Harrows	Sept. 2, 1862.
36,403	Grannis, Charles W	Gowanda, N. Y	Stills, coal-oil, condenser for	Sept. 9, 1862.
34,251	Grant, Hiram	Chicago, Ill	Roofing composition for railroad cars, &c	Jan. 28, 1862.
34,662	Grant, W. T., assignor to himself and James S. Snyder	Jacksonville, Ill	Grading and excavating, machines for	Mar. 11, 1862.
36,293	Grassler, William F., and A. J. Cutter	Lewisburg, Pa	Car coupling	Aug. 26, 1862.
	Gratz, R. H. (*See* Atteneder, Theodore, assignor.)			
35,874	Graves, Lorenzo S	Rochester, N. Y	Boots and shoes, dies for cutting bevelled soles for	Jan. 15, 1862.
1,322	Gray, Albert W	Middletown, Vt	Horse-powers (Reissue)	July 1, 1862.
34,629	Gray, Alexander Farchar	Belleville, Ill	Water-elevators	Mar. 11, 1862.
35,676	Gray, Davis and Josiah	Wayland, N. Y	Axle-skeins	June 24, 1862.
36,404	Gray, James S	New York, N. Y	Burners, vapor, self-generating	Sept. 9, 1862.
	Gray, Sol. S., and Joseph P. Woodbury. (*See* Woodbury & Gray.)			
35,677	Greaves, James	Utica, N. Y	Pumps	June 24, 1862.
36,708	Greaves, James	Utica, N. Y	Pumps	Oct. 21, 1862.
36,753	Greely, Josiah B., assignor to himself and B. T. Latham	Summit, Iowa	Planters, corn	Oct. 21, 1862.
36,754	Green, Carl E., assignor to Thorwald F. Hammer	Copenhagen, Denmark	Watch-chain guards or keys	Oct. 21, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35,751	Green, Henry	Antwerp, N. Y.	Boots and shoes, metallic heels for	July 1, 1862.
34,630	Green, Isaac A	Henry, Ill.	Cultivators	Mar. 11, 1862.
	Green, J. S., jr., *et al.* (*See* Armstrong, F. W., assignor.)			
34,631	Green, Leonard A	Rocky Hill, Conn	Line-holders for masons' work	Mar. 11, 1862.
1,569	Green, W. H., and P. J. Clark, assignors to S. S. Clark	Meriden, Conn	Chandelier (Design)	April 29, 1862.
1,614	Green, Wm. H., and P. J. Clark, assignors to S. S. Clark	Meriden, Conn	Lamp bracket (Design)	Aug. 5, 1862.
34,422	Greene, J. Durell	United States army	Fire-arm, breech-loading	Feb. 18, 1862.
36,584	Greene, Jerome B., assignor to Elliott P. Gleason	Providence, R. I.	Lamp chimneys, heater for	Sept. 30, 1862.
35,854	Greene, John F., assignor to Samuel Boyd Tobey	Warwick, R. I.	Fabric, water-proof	July 8, 1862.
35,855	Greene, John F., assignor to Samuel Boyd Tobey	Warwick, R. I.	Fabrics, water-proof, machine for manufacturing	July 8, 1862.
36,213	Greene, William A	Albany, N. Y.	Heaters, sadiron	July 18, 1862.
36,346	Gregg, William	Philadelphia, Pa	Refrigerator	Sept. 2, 1862.
34,716	Gregor, Charles, assignor to himself and Chas. Schweitzer	New York, N. Y	Cork into strips, machinery for cutting	Mar. 18, 1862.
	Gregory, George W. (*See* Seymour, Elias W., assignor.)			
	Gregory, George W., and Nelson Orcutt. (*See* Worthing, John P., assignor.)			
	Gregory, James. (*See* Sutton, John, assignor.)			
34,611	Gregory, Willis L., assignor to self and Gardiner Landon, jr.	Amsterdam, N. Y	Skates	Mar. 4, 1862.
	Grenell, H. W., and H. B. Lansing. (*See* Lansing & Grenell.)			
	Gridley, F. C. (*See* Clay, James O., assignor.)			
36,612	Griffin, James F	New York, N. Y	Jars, fruit	Oct. 7, 1862.
35,980	Griffin, Caleb H., assignor to Walter D. Richards	Lynn, Mass	Ores, grinding and amalgamating the precious metals, apparatus for.	July 22, 1862.
34,250	Griffin, Thomas J	Brooklyn, N. Y	Camp cot and chest combined	Jan. 28, 1862.
34,289	Griffing, Augustus P	East Cambridge, Mass	Inkstand	Feb. 4, 1862.
1,293	Griffing, Augustus P	East Cambridge, Mass	Inkstand (Reissue)	Mar. 25, 1862.
36,083	Griffith, Philip	Philadelphia, Pa	Grate-bars	Aug. 5, 1862.
34,360	Griffiths, John W	Brooklyn, N. Y	Ship-building	Feb. 11, 1862.
35,282	Griffiths, John W	Philadelphia, Pa	Vessels, navigable	May 13, 1862.
36,347	Griffiths, Thomas F	Dansville, N. Y	Carriages, hold-back for	Sept. 2, 1862.
	Griggs, Elizur D. (*See* Holmes, C. E. L., assignor.)			
33,310	Griggs, Elizur D	Waterbury, Conn	Photographic albums	May 20, 1862.
33,309	Grimshaw, William D	Newark, N. J	Hammers, forging	May 20, 1862.
36,687	Grimshaw, William D., assignor to himself and Conrad A. Ten Eyck.	Newark, N. J	Washing machine	Oct. 14, 1862.
35,932	Griswold, George W	Logansport, Ind	Bridle, halter	July 22, 1862.
35,933	Griswold, George W	Logansport, Ind	Can for preserving fruits, &c.	July 22, 1862.
35,312	Griswold, Richard	Brainbridge, N. Y	Pens, metallic	May 20, 1862.
36,780	Groh, John M	Shaefferstown, Pa	Harvesters	Oct. 28, 1862.
34,929	Groom, Smith, assignor to himself, Jacob Shavor, and Lewis Potter.	Troy, N. Y	Stoves	April 8, 1862.
35,574	Groom, Smith	Troy, N. Y	Stoves	June 10, 1862.
36,820	Groom, Smith, assignor to himself and Jacob Shavor	Troy, N. Y	Shot, canister, explosive	Oct. 28, 1862.
34,232	Grosjean, Florain	New York, N. Y	Spoons, sheet-metal	Jan. 28, 1862.
34,628	Gross, John	Manilla, Ind	Cultivators	April 1, 1862.

36,147	Grover, Demus L., and Luther S. Wright	Groton, N. Y	Churns	Aug. 12, 1862.
34,092	Grover, Manasseh	Clyde Village, Ohio	Ploughs	Jan. 7, 1862.
37,226	Grover, Morgan L	Duplainville, Wis	Washing machine	Dec. 23, 1862.
35,516	Grover, Simeon, and Stephen Putnam	Newton, Mass	Coal-sifters	June 10, 1862.
36,348	Grover, William	Holyoke, Mass	Gas-regulator	Sept. 2, 1862.
34,571	Grover, William O	Boston, Mass	Sewing-machine needles	Mar. 4, 1862.
36,495	Grover, William O	West Roxbury, Mass	Sewing machines	Sept. 9, 1862.
35,372	Grow, Ralph	Galesburg, Ill	Soap, benzole	May 27, 1862.
36,516	Grow, Ralph	Galesburg, Ill	Soap, manufacture of	Sept. 23, 1862.
34,329	Grundt, Hermann, assignor to Hess, Kessel & Co	Berlin, Prussia	Pontoon, iron	Feb. 4, 1862.
34,330	Gifford, Chaney H	Troy, N. Y	Carriage wheels, machine for making	Feb. 4, 1862.
35,373	Guernsey, Calvin O	Cornwall, Vt	Watch escapements	May 27, 1862.
	Guest, Edmund, and William Irwin. (*See* Irwin & Guest.)			
36,494	Guild, Lewis, assignor to Willard Everett & Co	Dedham, Mass	Washing machine, rollers for	Sept. 16, 1862.
35,604	Guild, William H	Brooklyn, E. D., N. Y	Pumps, rotary	June 17, 1862.
	Guiterman, Simon. (*See* Vogl, David, assignor.)			
37,039	Gunn, D. M., and C. L. Cain	Oskaloosa, Iowa	Bee-hives	Dec. 2, 1862.
34,683	Guyer, Earl	Walcott, Vt	Stoves	Mar. 18, 1862.
34,681	Guyer, Earl	Walcott, Vt	Saw-mills	Mar. 18, 1862.
36,709	Gwyn, Edward, and A. C. Campbell	Hamilton, Ohio	Fire-arms, breech-loading	Oct. 21, 1862.
34,682	Gwynne, W. H	Brooklyn, N. Y	Gas-water, apparatus for making	Mar. 11, 1862.
36,002	Gwynne, W. H	White Plains, N. Y	Gas, illuminating, manufacture of	July 29, 1862.
34,832	Haag, Joel, and J. C. Smith	Beaverville, Pa	Water-wheel	April 1, 1862.
	Haeker, Levi L. (*See* Witsel, George L., assignor.)			
36,903	Hadley, William Swain	Norwalk, Ohio	Taps, reamers, &c., guide attachments for	Nov. 11, 1862.
35,752	Haecker, Ludwig	Altenburgh, Hungary	Brewing when Indian corn is used	July 1, 1862.
37,095	Haeffner, Valentine	Dobb's Ferry, N. Y	Cellar, artificial	Dec. 9, 1862.
36,406	Haering, Robert	New York, N. Y	Composition substitute for horn, hard rubber, &c.	Sept. 9, 1862.
36,613	Hageman, James	Williamsburg, Ohio	Buckets and measures	Oct. 7, 1862.
36,149	Haight, Moses C	Buffalo, N. Y	Skates, ankle support for	Aug. 12, 1862.
	Hailes, Wm., and John G. Treadwell. (*See* Treadwell & Hailes.)			
36,959	Hailes, William	Albany, N. Y	Grates for coal stoves and furnaces	Nov. 18, 1862.
	Hair, J. J. (*See* Briggs, John, assignor.)			
	Hale, Joseph P. (*See* Tracy, Dwight, assignor.)			
36,614	Hale, Robert W	Boston, Mass	Feed-water heating apparatus	Oct. 7, 1862.
34,142	Haley, John J	South Dedham, Mass	Wringing machines, rollers for	Jan. 14, 1862.
1,270	Haley, John J	South Dedham, Mass	Wringing machines, rollers for (Reissue)	Feb. 4, 1862.
34,488	Hall, Ashman, and Jno. Faulkner	Dansville, N. Y	Mills, fanning	Feb. 25, 1862.
37,197	Hall, David E., assignor to himself, Vasconcellos Houghton, William A. Nichols, and Theodore C. Sears.	Brooklyn, N. Y	Lamps, coal-oil	Dec. 16, 1862.
	Hall, Edward. (*See* Davis, Job C., assignor.)			
34,463	Hall, E. J., assignor to himself and C. P. Stimets, assignors to C. P. Stimets.	Highgate, Vt	Caster, spring	Feb. 18, 1862
34,489	Hall, H., J. Hall, T. Hall, and H. Hall, jr	Philadelphia, Pa	Pictures, cards, &c., metallic cases for	Feb. 25, 1862
36,003	Hall, Henry M	Danby, Vt	Shawl pins	July 29, 1862
35,020	Hall, Jeremiah	Granville, Ohio	Car-brakes, reaction	April 22, 1862
35,517	Hall, John C	Cincinnati, Ohio	Sofa, convertible into a table, trunk, cot, &c	June 10, 1862.
	Hall, John S., and J. M. Connel. (*See* Connel & Hall.)			
33,095	Hall, John S	Pittsburg, Pa	Ordnance, breech-loading	April 29, 1862.
35,819	Hall, John S	Pittsburg, Pa	Plough-shares	July 8, 1862.
36,691	Hall, John S	Pittsburg, Pa	Forging, bending, and shaping plough-shares, machine for.	Oct. 14, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
36, 808	Hall, L. F	Fonda, N. Y	Shawl pins	Nov. 4, 1862.
36, 612	Hall, O. J., assignor to himself and Franklin Decker	Pittsford, N. Y	Railroad chairs	Mar. 4, 1862.
34, 361	Hall, R. H	Owego, N. Y	Axles for wheel vehicles	Feb. 11, 1862.
	Hall, Samuel, deceased, by John H., executor	Pittsburg, Pa	Ploughs (Extension)	April 7, 1862.
36, 064	Hall, William Smith	Milton, Mass	Sewing machines	Aug. 5, 1862.
	Halliday, William, John S. Giles, and John A. Rue. (*See* Giles, Halliday & Rue.)			
33, 313	Halsted, James D. and Augustus M	Rye, N. Y	Cultivators, hand	May 20, 1862.
1, 309	Ham, Robert, assignor to Smith, Sheldon & Co	Troy, N. Y	Stove, cook's (Design)	Jan. 7, 1862.
35, 735	Hamblet, James, jr	Boston, Mass	Clocks, watch	July 1, 1862.
34, 982	Hamer, James A., assignor to Wm. L. Paxson	West Vincent, Pa	Brick moulds	Jan. 28, 1862.
36, 294	Hamilton, Robert	Franklin, Ind	Sugar evaporator, portable	Aug. 26, 1862.
36, 904	Hamilton, Samuel H., and Charles A. Ashton	Jacksonville, Ill	Ice-cream freezer	Nov. 11, 1862.
34, 490	Hamilton, William	West Pittsburg, Pa	Axles, mode of securing wheels to	Feb. 25, 1862.
	Hamlin & Mason. (*See* Woods, George, assignor.)			
34, 143	Hamlin, E. C	Pavillion, N. Y	Car-coupling	Jan. 14, 1862.
36, 710	Hamlin, N. S	St. Louis, Mo	Prescription cases, physicians'	Oct. 21, 1862.
34, 663	Hammer, Gustavus, assignor to Holstein & Hammer	Cincinnati, Ohio	Mouldings, oval, machine for planing	Mar. 11, 1862.
	Hammer, Theo. R., and James F. Stevenson. (*See* Stevenson & Hammer.)			
	Hammer, Thorwald F. (*See* Green, Carl E., assignor.)			
36, 460	Hance, Royal	Piscatonica, Ill	Harvesters	Sept. 16, 1862.
37, 080	Hancock, Joseph M	Philadelphia, Pa	Lamps, coal-oil	Dec. 2, 1862.
36, 295	Hanes, Wm. W	Covington, Ky	Projectile, explosive, for ordnance	Aug. 26, 1862.
	Hanscom, Jackson M., and George H. Mills. (*See* Mills & Hanscom.)			
	Hanyen, W. H., and Adam Hawver. (*See* Hawver & Hanyen.)			
	Hanzo, Lewis, *et al.* (*See* Derocquigny, Gance & Hanzo.)			
	Harden, S. W., *et al.* (*See* Hines, Saterlee & Harden.)			
36, 407	Hardick, John and Charles B	Brooklyn, N. Y	Valves for steam-engines	Sept. 9, 1862.
34, 098	Hardie, J. W., and A. S. Hayward, assignors to A. S. Hayward and James B. Ogden.	New York, N. Y	Knife, fork, and spoon, combination of	Jan. 7, 1862.
34, 999	Harding, Abner S., assignor to self and A. S. Dodge	Mount Hope, N. Y	Grain, machines for raking and binding	April 15, 1862.
34, 253	Hardwick, Peter W	Williamsburg, Ind	Carriages, and apparatus for attaching and detaching horses from.	Jan. 28, 1862.
36, 148	Hardy, Moses F	Seward, N. Y	Ordnance, revolving	Aug. 12, 1862.
36, 083	Harfield, William Horatio	London, England	Cables, chain, apparatus for working and stoppering	Aug. 5, 1862.
36, 086	Harfield, William Horatio	London, England	Cables, chain, apparatus for working and stoppering	Aug. 5, 1862.
36, 087	Harfield, William Horatio	London, England	Windlasses, chain and cable, construction of	Aug. 5, 1862.
35, 233	Harnish, Benjamin	Pequa, Pa	Water-wheels	May 13, 1862.
37, 133	Harnly, Jacob H., assignor to himself, Jacob Harnly, G. R. Hendrickson, and H. B. Dunlap.	Penn township, Pa	Harvesters, rakes for	Dec. 9, 1862.
36, 194	Harold, Thos. Geo., assignor to himself and Charles Perley	Brooklyn, N. Y	Locks	Aug. 5, 1862.
36, 711	Harper, Derastus	Crystal Lake, Ill	Ploughs	Oct. 21, 1862.
36, 951	Harper, Henry	Berlin, Wis	Gauges for carriage axles	Nov. 18, 1862.
34, 633	Harper, James	East Haven, Conn	Paper, machinery for making	Mar. 11, 1862.
36, 088	Harper, John H	Washington, D. C	Bee-hives	Aug. 5, 1862.
35, 417	Harper, Louis, assignor to Wm. T. Glidden	Brooklyn, N. Y	Fertilizers	May 27, 1862.
35, 820	Harriman, B. F	Warner, N. H	Press, cheese	July 8, 1862.
35, 952	Harrington, Ebenezer	Boston, Mass	Grates, stove	Nov. 18, 1862.
35, 234	Harris, Dan. M., and S. S. Burnet	Salem, Mass	Clothes wringer	May 13, 1862.
36, 296	Harris, George L. and Samuel	Mobile, Ala	Sifting machines	Aug. 26, 1862.
37, 227	Harris, Henry A	Battle Creek, Mich	Carriages, hold-backs for	Dec. 23, 1862.
35, 426	Harris, Joel	New Carlisle, Ind	Bee-hives	May 27, 1862.
36, 297	Harris, John K	Allensville, Ind	Presses, baling	Aug. 26, 1862.
1, 307	Harris, Joseph, jr., and Dan'l Holmes, ass'rs to Dan'l Holmes.	Chelsea, Mass	Carpet-beating machine (Reissue)	May 13, 1862.
36, 935	Harris, William	Jersey City, N. J	Tires, machines for bending	Nov. 18, 1862.
35, 605	Harrison, C. C., and Joseph Schnitzer	New York, N. Y	Cameras, photographic, lens for	June 17, 1862.
35, 678	Harrison, Joseph, jr	Philadelphia, Pa	Boilers, steam, device for removing incrustations from	June 24, 1862.
36, 089	Harrison, Samuel	Pottsville, Pa	Pumping-engines	Aug. 5, 1862.
35, 873	Harrold, Geo. W	Rochester, N. Y	Lamps, fountain	July 15, 1862.
34, 362	Harryman, Newton S	Frankfort, Ind	Cultivators	Feb. 11, 1862.
34, 956	Harshbarger, Isaac M	Brandonville, Va	Soap, manufacture of	April 15, 1862.
35, 679	Harter, M	Independence, Iowa	Saccharine liquids, evaporating	June 24, 1862.
	Hartford Carpet Company. (*See* Thompson, Henry G., assignor. Design.)			
	Hartford Carpet Company. (*See* Thompson, Henry G., assignor. Design.)			
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List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	Hartford Carpet Company. (*See* Thompson, Henry G., assignor. Design.)			
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	Hartford Carpet Company. (*See* Thompson, Henry G., assignor. Design.)			
	Hartford Carpet Company. (*See* Thompson, Henry G., assignor. Design.)			
35, 021	Hartley, N. D., and M. S. Morehouse	Quincy, Ill.	Pots, coffee	April 22, 1862.
36, 298	Hartman, Samuel H.	Pittsburg, Pa.	Punching linch-pin holes and cutting off the journals of axles for wagons, &c., machines for.	Aug. 26, 1862.
36, 299	Hartman, Samuel H.	Pittsburg, Pa.	Valves, slide for steam-engines	Aug. 26, 1862.
	Hartshorn, John. (*See* Chamberlain, D. H., assignor.)			
36, 090	Harvey, Charles T.	Chicago, Ill.	Kilns, charcoal	Aug. 5, 1862.
1, 510	Harwood, Luther W., assignor to Philo P. Stewart.	Troy, N. Y.	Stove plates, parlor (Design)	Jan. 7, 1862.
35, 022	Hascall, Jeremiah H.	Cornuna, Mich.	Medicine for miasmetic diseases	April 22, 1862.
37, 096	Haskall, E. P.	Harlan, Ind.	Wood, machine for bending	Dec. 9, 1862.
	Haskins, Henry. (*See* Frost, Francis N., assignor.)			
35, 418	Haskins, John, assignor to Samuel P. Blake.	Roxbury, Mass.	Gun-nipple protector	May 27, 1862.
	Haskins, James P., and John W. Barker. (*See* Barker & Haskins.)			
34, 205	Hastings, A. Horace.	New York, N. Y.	Refrigerator	Jan. 21, 1862.
34, 491	Hastings, A. Horace.	New York, N. Y.	Piano	Feb. 25, 1862.
34, 229	Hatfield, John, assignor to Percy & King.	Troy, N. Y.	Paper boxes, machine for making	Jan. 21, 1862.
34, 572	Hatfield, Oliver P.	New York, N. Y.	Elevator	Mar. 4, 1862.
35, 606	Hatfield, W. E.	Newark, N. J.	Sinks, &c., odor-traps for	June 17, 1862.
1, 511	Hathaway, David, assignor to Fuller, Warren & Co.	Troy, N. Y.	Stove plates, cook's (Design)	Jan. 7, 1862.
1, 512	Hathaway, David, assignor to Fuller, Warren & Co.	Troy, N. Y.	Stove, oven (Design)	Jan. 7, 1862.
34, 685	Hathaway, John M.	New York, N. Y.	Shell, explosive, for ordnance	Mar. 18, 1862.
35, 607	Hathaway, R. F.	New Bedford, Mass.	Raising and transporting stone	June 17, 1862.
34, 492	Havard, J. P. A., and J. B. Bourgoise.	Paris, France.	Filters, portable	Feb. 25, 1862.
34, 686	Havemeyer, T. A., and Henry Schnitzspan.	New York, N. Y.	Sugar moulds, carriages for	Mar. 18, 1862.
	Haven, James L. (*See* Sedgebeer, Joseph, assignor.)			
36, 091	Havens, Jonathan H.	Lewiston, N. Y.	Cradle-chair	Aug. 5, 1862.
34, 493	Havens, William H.	Paterson, N. J.	Projectiles for rifled ordnance	Feb. 25, 1862.
34, 365	Hawes, Loring P.	New York, N. Y.	Veneers, machines for cutting	Feb. 11, 1862.
35, 934	Hawkins, George H.	New York, N. Y.	Bonnet frames	July 22, 1862.
34, 495	Hawkins, Jonas N.	Islip, N. Y.	Clam-opener	Feb. 25, 1862.
36, 905	Hawkins, Samuel R.	Beallsville, Pa.	Rack, sheep, portable and convertible	Nov. 11, 1862.
34, 364	Hawkins, William L.	Lockhaven, Pa.	Stump-extractors	Feb. 11, 1862.
	Hawkhurst, Nathaniel O. (*See* Combe, William, assignor.)			
35, 933	Hawley, George F.	Vienna, Ill.	Saws, machines for filing	July 22, 1862.
35, 020	Haworth, H. & E.	Ridge Farm, Ill.	Cane, sugar, strippers	June 24, 1862.
34, 957	Haworth, John.	Manchester, England	Railways, street	April 15, 1862.
34, 717	Hawse, Benjamin B., assignor to Charles Pierce.	Morrisville, Vt.	Tents	Mar. 18, 1862.
34, 144	Hawver, Adam, and W. H. Hanyen.	Galva, Ill.	Churn and butter-worker	Jan. 14, 1862.
35, 314	Hay, Andrew K.	Winslow, N. J.	Glass furnaces	May 20, 1862.
	Hayden, Holmes & Booth. (*See* Atwood, Lewis J., ass'r.)			
	Hayden, Holmes & Booth. (*See* Blakslee, Edw'd C., ass'r.)			
34, 363	Hayden, Isaac.	Lawrence, Mass.	Cotton, machinery for cleaning	Feb. 11, 1862.
34, 254	Hayden, John J.	Indianapolis, Ind.	Roofing, metallic	Jan. 28, 1862.
34, 145	Hayden, Josiah.	Columbus, Ohio.	Water-elevators	Jan. 14, 1862.
36, 300	Hayden, Josiah.	Haydenville, Mass.	Water-elevators	Aug. 26, 1862.
36, 049	Hayden, Peter.	Pittsburg, Pa.	Lamps	Oct. 14, 1862.
	Hayden, Wm., and Jno. Simpson. (*See* Simpson & Hayden.)			
36, 150	Hayes, Clark J., and Martin Newman.	Unadilla, N. Y.	Boards, machine for edging and slitting	Aug. 12, 1862.
	Hayes, Clark P., *et al.* (*See* Sanford, Mallory & Hayes.)			
35, 821	Hayes, George E.	Buffalo, N. Y.	Vulcanizing flasks, fastening covers to	July 8, 1862.
35, 822	Hayes, Isaac.	Philadelphia, Pa.	Water-wheel	July 8, 1862.
1, 519	Hayes, Jabez W.	Newark, N. J.	Trade-mark on sword blades (Design)	Feb. 18, 1862.
1, 522	Hayes, Simeon.	Prattsburg, N. Y.	Trellis frame (Design)	Feb. 4, 1862.
	Haynes, Cyrus, and D. H. Shearer. (*See* Shearer & Haynes.)			
	Hayward, A. S., and J. W. Hardie. (*See* Hardie & Hayward.)			

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	Hayward, George. (*See* Place, William H., assignor.)			
34, 634	Hayward, Henry	Chicago, Ill	Paper, safety	Mar. 11, 1862.
	Hazen, Alonzo, and Alonzo M., *et al.* (*See* Fairchild, L. S., assignor.)			
36, 349	Hazen, Jasper	Bethlehem, N. Y	Bee-hives	Sept. 2, 1862.
36, 461	Hazen, Luther T	Coventry, N. Y	Vehicles, &c., mode of securing cross-bar and shafts to	Sept. 16, 1862.
35, 974	Head, Smith, assignor to himself and William McKissick	Millersburg, Pa	Shingle machines	July 22, 1862.
35, 442	Heald, I. A	Washington, D. C	Cigars, machine for making	June 3, 1862.
	Heath, Charles, and Joseph Wilson, administrators of Joseph B. Wilson, deceased. (*See* Wilson, Joseph B.)			
36, 517	Heath, Eleander	San Francisco, Cal	Mills, spice	Sept. 23, 1862.
35, 374	Heath, George	Little Falls, N. Y	Bridges, wrought-iron	May 27, 1862.
35, 756	Heath, George	Little Falls, N. Y	Canal lock gates, valves or wickets for	July 1, 1862.
	Heaton, David, 2d. (*See* Williams, Turner, assignor.)			
35, 443	Heaton, Edward	New Haven, Conn	Ordnance	June 3, 1862.
37, 166	Heaton, H. I	Peoria, Ill	Cultivators	Dec. 16, 1862.
34, 958	Heaton, John	Flushing, N. Y	Weights, raising and lifting	April 15, 1862.
36, 997	Heavener, A	Piano, Ill	Threshold, water-proof	Nov. 25, 1862.
1, 879	Hebard, George F., George J. Hill, and S. D. Rockwell, assignors by mesne assignments to Sanford Harroun & Co.	Buffalo, N. Y	Printing-press (Reissue)	Feb. 25, 1862.
1, 548	Hebbard, Henry	New York, N. Y	Spoon or fork handle (Design)	Mar. 4, 1862.
	Heberger, Michael, and John Gibson. (*See* Gibson & Heberger.)			
36, 518	Heberhart, F. C	Madison, Ind	Meat-chopper	Sept. 23, 1862.
36, 214	Heckman, Henry	Danville, N. Y	Threshing machines	Aug. 19, 1862.
35, 518	Heckrotte, A. G	New York, N. Y	Washing machines	June 10, 1862.
	Hecksher, Edward. (*See* Beslay, Charles, assignor.)			
1, 347	Hedges, Wheeler, assignor through mesne assignments to P. W. Gates, Thomas Chalmers, and David R. Fraser.	Chicago, Ill	Sugar juices and solutions, by means of steam, evaporating. (Reissue.)	Oct. 28, 1862.
1, 348	Hedges, Wheeler, assignor through mesne assignments to P. W. Gates, Thomas Chalmers, and David R. Fraser.	Chicago, Ill	Sugar juices and solutions, apparatus for evaporating. (Reissue.)	Oct. 28, 1862.
1, 349	Hedges, Wheeler, assignor through mesne assignments to P. W. Gates, Thomas Chalmers, and David R. Fraser.	Chicago, Ill	Sugar juices, apparatus for defecating and evaporating. (Reissue.)	Oct. 28, 1862.
1, 350	Hedges, Wheeler, assignor through mesne assignments to P. W. Gates, Thomas Chalmers, and David R. Fraser.	Chicago, Ill	Sugar juices and solutions, evaporating pan for. (Reissue.)	Oct. 28, 1862.
34, 959	Heilig, Daniel	Nebraska City, Neb. Ter	Stoves	April 15, 1862.
34, 494	Heilman, Paul	Mulhousetown, France	Yarns to the action of liquids, machinery for submitting	Feb. 25, 1862.
35, 235	Heiter, Simon	Philadelphia, Pa	Tents	May 15, 1862.
	Heitkamp, L., and G. Trinks. (*See* Trinks & Heitkamp.)			
34, 366	Held, Charles W	Brooklyn, N. Y	Leather, enamel for	Feb. 11, 1862.
35, 608	Heller, Samuel	New York, N. Y	Pantaloons, attaching straps to	June 17, 1862.
34, 960	Helm, Robert C	New Brunswick, N. J	Cloth, diagonal, method of producing	April 15, 1862.
	Hely, George. (*See* Pogue, Wilson T., assignor.)			
34, 496	Hendee, C. F	Waterbury, Conn	Skirts, hoop	Feb. 25, 1862.
35, 823	Henderson, David	Merrimack, N. H	Cloths, woollen, machines for dressing and drying	July 8, 1862.
37, 228	Henderson, Joseph C	Albany, N. Y	Heaters	Dec. 23, 1862.
	Henderson, Thomas W., and James R. Finch. (*See* Finch & Henderson.)			
35, 753	Hendrick, Eli E	New York, N. Y	Lubricating composition	July 1, 1862.
35, 754	Hendrick, Eli E	New York, N. Y	Lubricating composition for machinery	July 1, 1862.
36, 350	Hendricks, J. Moore	Philadelphia, Pa	Hulling machines	Sept. 2, 1862.
34, 330	Hendrickson, Ezekiel M., assignor to himself, James H. Prentice, and Job W. Blackham	Brooklyn, N. Y	Sewing machines	Feb. 4, 1862.
	Hendrickson, G. R., *et al.* (*See* Harnly, Jacob H., assignor.)			
34, 497	Hendryx, A. B	Seymour, Conn	Augers, hollow	Feb. 25, 1862.
36, 093	Hendryx, A. B., and Franklin Farrel	Seymour, Conn	Turning irregular forms, machine for	Aug. 5, 1862.
36, 092	Heneage, Robert	Buffalo, N. Y	Tobacco-smoking pipes	Aug. 5, 1862.
36, 519	Henfrey, John	United States army	Bedstead	Sept. 23, 1862.
35, 884	Henry, J. L	District of Columbia	Projectiles for rifled ordnance	July 8, 1862.
35, 609	Henry, Remi	Morrisania, N. J	Pumps	June 17, 1862.
36, 650	Henry, Robert P	Akron, Ohio	Marble and freestone, machine for scouring	Oct. 14, 1862.
34, 573	Hermance, William G	Albany, N. Y	Straw-cutters	Mar. 4, 1862.
34, 752	Herrick, John I	Milwaukie, Wis	Stoves	Mar. 25, 1862.
	Herron, Jas. P., and Jno. D. Ehlers. (*See* Ehlers & Herron.)			
1, 628	Hesdra, Constant, assignor to W. H. Core and A. Lorens	Brooklyn, N. Y	Show-case, base of a (Design)	Aug. 12, 1862.
	Hess, Kessel & Co. (*See* Grundt, Hermann, assignor.)			
35, 060	Heston, William, assignor to Alden H. Comstock	Bedford, Ohio	Horse-powers	April 22, 1862.
36, 151	Hewitt, John	Carmichael, Pa	Churns	Aug. 12, 1862.
	Hewlett, J. J., and J. Remsen Dikeman. (*See* Dikeman & Hewlett.)			
36, 462	Hibbard, A. A	Hermitage, N. Y	Saws, machines for setting and unsetting	Sept. 16, 1862.
	Hibbert, James, deceased, by Peleg Hull, administrator	Providence, R. I	Knitting-needles (Extension.)	Dec. 29, 1862.
1, 257	Hicks, Charles, assignor to American Flask and Cap Co	New Haven, Conn	Caps, percussion, machine for varnishing (Reissue.)	Jan. 14, 1862.
34, 574	Hicks, George B	Cleveland, Ohio	Telegraphic apparatus	Mar. 4, 1862.
36, 585	Hicks, Isaac, assignor to self and Lewis E. Peck	Hartford, Conn	Stump extractors	Sept. 30, 1862.
	Hicks, Merrill E., and Orin Sweet. (*See* Sweet & Hicks.)			
36, 125	Higgins, Elizabeth, assignor to Henry Higgins	Boston, Mass	Dress-protector	Aug. 5, 1862.
34, 753	Higgins, James, and Thomas Schofield Whitworth	Salford, Great Britain	Roving frames	Mar. 25, 1862.
36, 463	Higgins, Thomas	Bow, England	Matches, tapers, &c., filling dipping clamps in the manufacture of	Sept. 16, 1862.
	Higgins, Willard S. (*See* Rouse, Philander, assignor.)			
34, 961	Hiler, Selah	Harlem, N. Y	Gun barrels, manufacture of	April 15, 1862.
36, 053	Hill, Albert M., assignor to Charles A. Miller	Bradford, Conn	Locks	July 29, 1862.
	Hill, Geo. J., *et al.* (*See* Hebard, Hill & Rockwell. Reissue.)			
35, 610	Hill, Levi L	Hudson, N. Y	Gas, illuminating, making	June 17, 1862.
1, 636	Hill, Walter S., and Samuel T. Reed	New York, N. Y	Chess or checker board (Design.)	Sept. 23, 1862.
34, 575	Hillard, James P	Fall River, Mass	Boilers, steam, high and low water detector for	Mar. 4, 1862.
	Hillson, Robert	Albany, N. Y	Furnaces, hot-air (Extension.)	Feb. 25, 1862.
36, 565	Hines, L. W., G. Satterlee, and S. W. Hanlon	Quasqueton, Iowa	Register, grain	Sept. 30, 1862.
37, 229	Hinkley, Jonas	Norwalk, Ohio	Links, adjustable	Dec. 23, 1862.
34, 423	Hirschbuhl, J. J	Louisville, Ky	Ammunition box, military	Feb. 18, 1862.
	Hoadley, J. C., and H. V. Butler. (*See* Butler & Hoadley.)			
36, 023	Hoag, A. C	Clinton, Ill	Broom	April 22, 1862.
	Hoard, J. W., and Geo. B. Wiggins. (*See* Wiggins & Hoard.)			
	Hodges, Chas. E., and N. D. Silsbee. (*See* Shaw, Philander, assignor.)			
34, 424	Hodgson, William, jr	Philadelphia, Pa	Glass measures, graduated, manufacture of	Feb. 18, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
36,615	Hodskinson, J., and O. C. Smith	Salem, Mass.	Washing and wringing machine	Oct. 11, 1862.
	Hoeft, Frederick. (*See* Kidder, Francis L., assignor.)			
33,876	Hoeniger, John	New York, N. Y.	Amalgamating gold and silver, machine for	July 15, 1862.
35,315	Hoffacins, Reuben	Dover, Pa.	Harvesters	May 20, 1862.
	Hoffman, C., and Wm. Graichen. (*See* Graichen & Hoffman.)			
35,152	Hogg, Peter	Brooklyn, N. Y.	Hydrometers	May 6, 1862.
	Hogness, M. O., and C. Krogh. (*See* Krogh & Hogness.)			
33,444	Holben, Jacob	Allentown, Pa.	Mills, grinding, operating	June 3, 1862.
34,576	Holbrook, Wm. H.	New York, N. Y.	Soap, silicated	Mar. 4, 1862.
34,754	Holcomb, Jedediah	Brandon, Vt.	Steelyards	Mar. 25, 1862.
34,839	Holden, Cyrus B., assignor to himself and S. H. Bowker	Worcester, Mass.	Fire-arm, breech-loading	April 1, 1862.
	Holden, Zelotes W., jr., *et al.* (*See* Thompson, Rosewell, ass'r.)			
35,445	Holdsworth, Samuel	Durham, England	Looms	June 3, 1862.
34,498	Hollen, F., and A. H. Pierce	Blairsville, Pa.	Wrench, screw	Feb. 25, 1862.
34,351	Hollen, Joseph	Fostoria, Pa.	Knitting machines	Sept. 2, 1862.
34,301	Holloway, Charles T.	Baltimore, Md.	Branding and stamping irons	Feb. 4, 1862.
34,804	Holly, Solomon T., assignor to Mary Manny	Rockford, Ill.	Harvesters	Mar. 25, 1862.
33,096	Holly, Solomon T.	Rockford, Ill.	Harvesters	April 29, 1862.
	Holmes, Booth & Hayden. (*See* Atwood, Lewis J., assignor.)			
	Holmes, Booth & Hayden. (*See* Blakeslee, Edw'd C., ass'or.)			
34,860	Holmes, C. E. L., assignor to himself and Elizur D. Griggs	Waterbury, Conn.	Lamps, shade for	April 1, 1862.
34,962	Holmes, Daniel	Chelsea, Mass.	Journals, rolling or frictionless	April 15, 1862.
	Holmes, Daniel, and Joseph Harris, jr. (*See* Harris & Holmes. Reissue.)			
34,459	Holmes, John	Boston, Mass.	Coal-sifters	Feb. 25, 1862.
34,853	Holmes, John	Boston, Mass.	Castor, ball furniture	April 1, 1862.
	Holmes, Peter. (*See* Power & Bailey, assignors.)			
1,615	Holmes, Silas A.	Brooklyn, N. Y.	Photographic background (Design.)	Aug. 5, 1862.
	Holmes, Wm. C., and Edward Dunn. (*See* Irvin, Thos. W., assignor.)			
	Holstein & Hammer. (*See* Hammer, Gustavus, assignor.)			
34,923	Holston, John C., assignor to Samuel M. Davis	Derry, N. H.	Coffee-roasters	April 8, 1862.
34,755	Holt, Jared	Albany, N. Y.	Trunk-stays, device for drawing in	Mar. 25, 1862.
1,606	Holzer, Julius, assignor to E. M. Manigle	Philadelphia, Pa.	Stove-plate (Design.)	Dec. 16, 1862.
	Homan, Henry. (*See* Roth, Gregory, assignor.)			
34,148	Hove, Robert A.	Washington, D. C.	Tobacco pipes	Jan. 14, 1862.
35,024	Hoopes, Jasper	Philadelphia, Pa.	Car-trucks	April 22, 1862.
	Hooten, Wm. H. (*See* Sweeny, Charles E., assignor.)			
37,072	Hope, Thomas, assignor to himself and Henry Edgarton	Boston, Mass.	Skates	Dec. 2, 1862.
36,651	Hopkins, Adam P.	Bentleysville, Pa.	Fence for sheepfolds	Oct. 14, 1862.
35,419	Hopkins, Charles W., assignor to himself, Thomas K. Bacon, and A. E. Cobb.	Norwich, Conn.	Fire-arms, revolving	May 27, 1862.
34,636	Hopkins, David A.	Brooklyn, N. Y.	Journal-boxes, railroad car	Mar. 11, 1862.
36,464	Hopkins, David A.	Brooklyn, N. Y.	Fire-arms, tubes for	Sept. 16, 1862.
	Hopkins, Harvey L. (*See* Davis, Richard M., assignor.)			
36,957	Hopkins, James	New York, N. Y.	Screens, metal	Nov. 18, 1862.
34,906	Hopkins, Obadiah	New York, N. Y.	Shells, defending redoubts by	Jan. 21, 1862.
	Hopkins, Peter, and Sam'l M. Seley. (*See* Seley & Hopkins.)			
	Hopkins, Wm. T. (*See* Hutchinson, C. S., assignor.)			
35,236	Hopper, William	Union Grove, Iowa	Wind-wheel	May 13, 1862.
36,978	Horn, Benjamin, assignor to himself and J. P. Rittenhouse	Flemington, N. J.	Washing machine	Nov. 18, 1862.
36,215	Hornaday, Nelson, assignor to himself and Z. Stubbs	West Elkton, Ohio	Fence, portable	Aug. 19, 1862.
	Horner, James. (*See* Harron, Thomas J., assignor.)			
	Horning, Lewis. (*See* Humphrey, James Y., assignor.)			
35,446	Horsley, Peter N.	Jersey City, N. J.	Hats, ventilators for	June 3, 1862.
36,408	Horsley, Samuel, and E. Hobsin Jones	Liverpool, England	Boots and shoes, apparatus for cleaning and polishing	Sept. 9, 1862.
1,342	Horstman, William H.	Brooklyn, N. Y.	Telegraphs, submarine cables for (Reissue.)	Sept. 9, 1862.
1,343	Horstman, William H.	Brooklyn, N. Y.	Telegraphs, submarine cables for (Reissue.)	Sept. 9, 1862.
	Horth, Hannah. (*See* Moffat, R. R., assignor.)			
	Horton, James, and John Martino. (*See* Martino & Horton.)			
35,836	Horton, James M., assignor to James H. Humphrey	Albany, N. Y.	Auger handles, shank-socket for	July 8, 1862.
34,627	Horton, M. L.	Claremont, N. H.	Mop-head	Mar. 18, 1862.
34,889	Hoskins, Richard	Dutch Flat, Cal.	Hose-coupling	April 8, 1862.
36,906	Hosmer, Thomas N.	Todd's Valley, Cal.	Levels, spirit	Nov. 11, 1862.
31,039	Hotchkiss, B. B.	Sharon, Conn.	Shot, canister, for ordnance	Jan. 7, 1862.
33,131	Hotchkiss, B. B.	Sharon, Conn.	Projectiles, explosive	May 6, 1862.
35,641	Hotchkiss, B. B.	Sharon, Conn.	Shells, explosive, concussion fuse for	June 17, 1862.
36,132	Hotchkiss, B. B.	Sharon, Conn.	Armor, defensive, metallic	Aug. 12, 1862.
36,463	Hotchkiss, B. B.	Sharon, Conn.	Shells, explosive, percussion fuse for	Sept. 16, 1862.
33,913	Hotchkiss, G. A.	Pleasant Township, Ind.	Press, &c., hay and cotton	July 15, 1862.
34,367	Hotchkiss, Julius	Middletown, Conn.	Cartridge, skin	Feb. 11, 1862.
	Hotchkiss, Julius. (*See* Cooke, James C., assignor.)			
33,134	Houchin, Thomas W.	Morrisania, N. Y.	Lamps, night	May 6, 1862.
33,619	Houck, Valentine W.	Buffalo, N. Y.	Crozing machines	June 10, 1862.
33,691	Houck, Valentine W.	Buffalo, N. Y.	Stave dressing machines	June 24, 1862.
35,375	Houghton, Henry A.	Lyme, N. H.	Clothes-dryer	May 27, 1862.
33,530	Houghton, H. N., and C. H. Denison	Halifax, Vt.	Shells for rifled ordnance	June 10, 1862.
34,500	Houghton, Nestor	New York, N. Y.	Bedstead springs	Feb. 25, 1862.
	Houghton, Vasconcellos, *et al.* (*See* Hall, David E., ass'or.)			
	House, George P. (*See* Neal & Emery, assignors. Reissue.)			
36,932	House, James A., and Henry A., assignors to themselves and Augustus G. Seaman.	Brooklyn, N. Y.	Sewing machines	Nov. 11, 1862.
34,425	House, Mark H.	Cleveland, Ohio	Baths, electric	Feb. 18, 1862.
33,682	Howard, Charles	Morris, N. Y.	Washing machine	June 24, 1862.
	Howard, Geo. C., and Wm. M. Randall. (*See* Randall & Howard.)			
34,426	Howard, George W.	Pontiac, Mich.	Tanks, oil	Feb. 18, 1862.
	Howard, George W. (*See* Gengembre, H. P., assignor.)			
33,683	Howard, Isabella J. H.	San Francisco, Cal.	Supporters, abdominal	June 24, 1862.
33,316	Howard, John R.	Worcester, Mass.	Brush, blacking, fountain	May 20, 1862.
36,779	Howard, Sebre	Elyria, Ohio	Fire-arms, breech-loading	Oct. 28, 1862.
35,447	Howard, William	Flushing, N. Y.	Lamp-chimney, coal-oil	June 3, 1862.
	Howe, A. B., and Smith Gardner. (*See* Gardner & Howe.)			
	Howe, Amasa Bemis. (*See* Sellier, Louis Jules, deceased, by Eugene Lemercier, administrator, assignor.)			
36,466	Howe, F. W.	Providence, R. I.	Fire-arms, breech-loading	Sept. 16, 1862.
	Howe, Jarvis	Brookfield, Mass.	Boot-trees (Extension.)	Oct. 28, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35,348	Howe, John, jr., Francis M. Strong, and Thomas Ross, assignors to John Howe, jr.	Brandon, Vt.	Scales, platform, portable	May 20, 1862.
37,210	Howell, John S	Portsmouth, N. H.	Governors	Dec. 23, 1862.
35,155	Howlett, Charles	Hartford, Conn	Balances	May 6, 1862.
37,107	Howlett, P. L.	Springfield, Ill	Distilling alcohol, &c., apparatus for	Dec. 16, 1862.
34,210	Howson, Henry, assignor to W. F. Warburton	Philadelphia, Pa	Matches, box for	Jan. 21, 1862.
34,963	Hoyt, W. H	Bethel, Conn	Hats, apparatus for felting	April 15, 1862.
	Hubbell, Henry S., Alfred S., and Thomas H. Wood. (*See* Wood, Hubbell & Hubbell. Design.)			
	Hubbell, Henry S., Alfred S., and Thomas H. Wood. (*See* Wood, Hubbell & Hubbell. Design.)			
	Hubbell, Henry S., Alfred S., and Thomas H. Wood. (*See* Wood, Hubbell & Hubbell. Design.)			
1,678	Hubbell, Henry S. and Alfred S	Buffalo, N. Y	Stoves, cook's (Design.)	Dec. 9, 1862.
1,679	Hubbell, Henry S. and Alfred S	Buffalo, N. Y	Stoves, cook's (Design.)	Dec. 9, 1862.
1,680	Hubbell, Henry S. and Alfred S	Buffalo, N. Y	Stoves, cook's (Design.)	Dec. 9, 1862.
	Hubbell, Peter. (*See* Blake, George F., assignor.)			
34,059	Hubbell, William W	Philadelphia, Pa	Shells, explosive, for ordnance	Jan. 7, 1862.
35,825	Hubbell, William Wheeler	Philadelphia, Pa	Projectiles for rifled ordnance	July 8, 1862.
35,506	Hubbell, William Wheeler	Philadelphia, Pa	Shells, concussion fuse for	Sept. 30, 1862.
36,153	Huber, Francis J	Cleveland, Ohio	Stone, artificial	Aug. 12, 1862.
36,154	Huber, Francis J	Cleveland, Ohio	Stone, artificial	Aug. 12, 1862.
36,155	Huber, Francis J	West Cleveland, Ohio	Building blocks	Aug. 12, 1862.
35,757	Huber, J., and R. M. McGrath	Lafayette, Ind	Corn-shellers and cleaners	July 1, 1862.
36,216	Huckett, William J	Marshall, Mich	Swings	Aug. 19, 1862.
35,448	Hudson, A. S	Sterling, Ill	Spur, springs	June 3, 1862.
37,038	Hudson, Frederick W	Leominster, Mass	Apple-pearer	Dec. 2, 1862.
35,449	Hudson, Thomas S	East Cambridge, Mass	Inkstands	June 3, 1862.
	Hühne, Augustus, and E. G. F. Arndt. (*See* Arndt & Hühne.)			
	Hull, Irving. (*See* Dunning, Elijah C., assignor.)			
37,231	Hull, Liverus	Charlestown, Mass	Treating caoutchouc	Dec. 23, 1862.
	Hull, Peleg, administrator, &c. (*See* Hibbert, James, deceased. Extension.)			
30,025	Hull, Sheldon	Oxford, Conn	Washing machine	April 22, 1862.
37,073	Hull, Stephen, assignor to himself and Isaac W. White	Poughkeepsie, N. Y	Harvesters	Dec. 2, 1862.
36,712	Hulskamp, G. Henry	Troy, N. Y	Piano-forte-action	Oct. 21, 1862.
36,713	Hulskamp, G. Henry	Troy, N. Y	Violins	Oct. 21, 1862.
	Humes, B. D., and A. Stockwell. (*See* Stockwell & Humes.)			
36,004	Humphrey, Daniel F	Saline, Mich	Ploughs	July 29, 1862.
36,616	Humphrey, D. W. G	Chelsea, Mass	Stitch, button-hole	Oct. 7, 1862.
36,617	Humphrey, D. W. G	Chelsea, Mass	Sewing machines	Oct. 7, 1862.
	Humphrey, James H. (*See* Horton, James M., assignor.)			
1,308	Humphrey, James Y., assignor to Lewis Horning	Montgomery county, Pa	Lamps, mica chimneys for (Reissue.)	May 13, 1862.
35,026	Humphrey, Lucinda	Tipton, Iowa	Skirt-protectors	April 22, 1862.
	Hunnewell, Isaac F (*See* Ward, James.)			

37,168	Hunsicker, Daniel	Laureltown, Pa	Water-motor	Dec. 16, 1862.
35,684	Hunt, Charles A	Urbana, Ill	Clothes-dryer	June 24, 1862.
36,217	Hunt, D. W	San Francisco, Cal	Wind-wheels, brakes for	Aug. 19, 1862.
36,837	Hunt, H. C., and G. W. Devin	Ottumwa, Ia	Pumps	Nov. 4, 1862.
	Hunt, Henry W. (*See* Lambert, Thomas S., assignor.)			
37,074	Hunt, Richard G	New York, N. Y	Gas-purifiers, wooden sieves for	Dec. 2, 1862.
36,005	Hunt, Rodney, and James H. Waite	Orange, Mass	Cloth, machinery for fulling	July 29, 1862.
35,237	Hunt, Simon B	New York, N. Y	Boiler-feeder, automatic	May 13, 1862.
34,501	Hunt, Solomon	Danville, Ind	Stoves, foot	Feb. 25, 1862.
35,936	Hunt, Solomon	Danville, Ind	Warmers, foot	July 29, 1862.
	Hunt, William P. (*See* Coffin, Z. C., assignor.)			
	Hunt, William P. (*See* Emerson, James, assignor.)			
35,156	Hunter, H. W	New York, N. Y	Compasses, magnetic	May 6, 1862.
36,781	Hunter, Thomas	New York, N. Y	Shield, portable, for riflemen	Oct. 28, 1862.
	Huntington, Walt T., and Harvey Platis. (*See* Mix, Eugene M. and James E., assignors.)			
	Huntley, Charles H., and Horace A. Smead. (*See* Smead & Huntley.)			
34,368	Hurd, Reuben	Spring Mill, Ill	Swine, to prevent them from rooting, device for cutting the noses of	Feb. 11, 1862.
37,097	Hurd, Zenus G	El Dorado, Ia	Mill-stone dresser	Dec. 9, 1862.
35,877	Hursh, Joseph	Philadelphia, Pa	Ordnance, arranging water tubes for cooling the breech of	July 15, 1862.
	Hurst, C., and William Ellmaker. (*See* Ellmaker & Hurst.)			
36,520	Huse, William W	Brooklyn, N. Y	Tobacco, manufacture of	Sept. 23, 1862.
36,955	Huse, William W	Brooklyn, N. Y	Tobacco, chewing, method of preparing	Nov. 8, 1862.
36,956	Huse, William W	Brooklyn, N. Y	Tobacco leaves, process of stripping	Nov. 8, 1862.
34,427	Huson, Edgar	Ithaca, N. Y	Carriages, &c., machine for raising	Feb. 18, 1862.
36,467	Huson, Samuel	Jacksonville, N. Y	Separators, grain and straw	Sept. 16, 1862.
36,782	Hussey, Daniel	Nashua, N. H	Bobbins	Oct. 28, 1862.
35,651	Hussey, E. C., assignor to himself and John Devlin	Brooklyn, N. Y	Bullets, elongated, machine for making	July 17, 1862.
36,783	Hutchins, Lyman	Norwich, Conn	Bed, camp	Oct. 28, 1862.
36,979	Hutchinson, C. S., assignor to William T. Hopkins	Burlington, N. J	Skirts, hoop	Nov. 18, 1862.
34,964	Hutchinson, Henry C	Cayuga, N. Y	Lamps	April 15, 1862.
35,157	Hutchinson, Henry C	Cayuga, N. Y	Lamps, burners for	May 6, 1862.
1,616	Hutchison, James, assignor to Jonathan E. Whipple	Lansingburg, N. Y	Floor-cloth pattern (Design)	Aug. 5, 1862.
35,652	Hyatt, Isaiah S. and John W., assignors to J. S. Hyatt and Oliver Bascom.	Chicago, Ill	Knife and scissors sharpeners	June 17, 1862.
	Hyde, Charles C., and Isaac Edge. (*See* Edge & Hyde.)			
35,758	Hyde, Edward J	Philadelphia, Pa	Coffee roasters	July 1, 1862.
37,232	Hyde, James, assignor to Thomas Keech	New York, N. Y	Batteries, floating, for ships and other navigable vessels	Dec. 23, 1862.
35,564	Hyde, James R., assignor to Charles Eddy & Co	Troy, N. Y	Stoves	June 10, 1862.
1,659	Hyde, James R	Troy, N. Y	Stove, cook's (Design)	Sept. 23, 1862.
	Hyslop, John. (*See* McKinnell, John, assignor.)			
33,097	Ingalls, Alfred	Independence, Ia	Tires, machines for upsetting	April 29, 1862.
35,238	Ingalls, Alfred	Independence, Ia	Saccharine juices, evaporator for	May 13, 1862.
36,156	Ingalls, Alfred	Independence, Ia	Mills, sugar-cane crushing	Aug. 12, 1862.
36,521	Ingalls, Alfred	Independence, Ia	Seeding machines	Sept. 23, 1862.
36,157	Ingalls, Elias T	Haverhill, Mass	Pegging machine, hand	Aug. 12, 1862.
36,998	Ingersoll, C. B	Morris, Ill	Cultivators	Nov. 25, 1862.
35,759	Ingersoll, Henrietta C	Bangor, Me	Broom	July 1, 1862.
	Ingham, John, and John Firth. (*See* Firth & Ingham.)			
35,200	Ingraham, C. D., assignor to himself and C. A. & A. Bradwell	South Hadley Falls, Mass	Straw and hay cutters	May 6, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
1,662	Ingraham, Elias	Bristol, Conn	Clock case (Design)	Sept. 13, 1862.
36,980	Irvin, Thomas W., assignor to William C. Holmes and Edward Dunn.	Marion county, Ind	Separators, grain	Nov. 18, 1862.
37,169	Irving, Benjamin	New York, N. Y	Skates	Dec. 16, 1862
36,352	Irwin, Alexander	Pittsburg, Pa	Engines for city railroads	Sept. 2, 1862
35,158	Irwin, John H	Bardstown, Ill	Lamps, coal-oil	May 6, 1862.
36,841	Irwin, John H	Chicago, Ill	Lanterns	Nov. 4, 1862.
35,975	Irwin, William, deceased, (by his administrator, John R. Irwin,) and Edmund Guest, assignors to Wm. Irwin.	North Coventry township, Pa	Washing machine	July 22, 1862.
35,277	Isbell, Charles W., assignor to himself and Edwin S. Ely	New York, N. Y	Projectiles, explosive	May 13, 1862.
35,159	Iseman, John	Roxston, Pa	Squares, joiners	May 6, 1862.
34,060	Isham, Henry	New Britain, Conn	Water-meters	Jan. 7, 1862.
34,147	Isham, Henry	New Britain, Conn	Water-meters	Jan. 14, 1862.
37,235	Ives, Joseph S	Morrisania, N. Y	Engraving machine	Dec. 23, 1862.
	Jackson, Amos, and Timothy L. Carley. (*See* Carley & Jackson.)			
	Jackson, Charles, and Thomas Goodrem. (*See* Goodrem & Jackson.)			
36,842	Jackson, Gam'l	Cincinnati, Ohio	Watchmakers' lathes	Nov. 4, 1862.
34,834	Jackson, Peter H	New York, N. Y	Windlass, vertical	April 1, 1862.
1,603	Jackson, Peter H	New York, N. Y	Fireplace frame (Design)	June 3, 1862.
36,006	Jackson, Peter H	New York, N. Y	Windlass, vertical	July 29, 1862.
36,652	Jacobs, John	Columbus, Ohio	Pens, pencils, &c., holders for	Oct. 14, 1862.
35,289	Jacobs, Thomas Thompson	Mt. Carroll, Ind	Lamps, mode of securing chimneys to	May 13, 1862.
35,376	Jagy, Casper	New York, N. Y	Locks	May 27, 1862.
35,450	Jahrans, Jacob and John G. Bickel	Buffalo, N. Y	Faucets	June 3, 1862.
34,207	James, Charles T	Providence, R. I	Projectiles, hot, for ordnance	Jan. 21, 1862.
1,275	James, Charles T	Providence, R. I	Projectiles (Reissue)	Feb. 11, 1862.
34,950	James, Charles T	Providence, R. I	Shot, hot, expanding sabots for	April 15, 1862.
34,965	James, Charles T	Providence, R. I	Shells, explosive, sabot for	April 15, 1862.
35,521	James, Charles T	Providence, R. I	Shells, explosive, for ordnance	June 10, 1862.
34,255	James, Thomas H. and Henry	Stockport, N. Y	Looms, power	Jan. 28, 1862.
	Jane, Antonio. (*See* Mencel, Antonio, assignor.)			
	Jansen, Geo., and Alois Schweizer. (*See* Schweizer & Jansen)			
37,206	Jaqua, Sherman	Paterson, N. J	Tires for locomotive wheels, machines for rolling	Dec. 16, 1862.
	Jaques, James A., and John A. Fanshawe. (*See* Fanshawe & Jaques.)			
	Jaques, J. A., and J. A. Fanshawe. (*See* Fanshawe & Jaques.)			
	Jarboe, John W., and Alexander Mackey. (*See* Mackey & Jarboe.)			
34,577	Jarden, Samuel	Baltimore, Md	Oil, kerosene, odorized	Mar. 4, 1862.
35,685	Jarre, P. J	Paris, France	Fire-arm, repeating	June 24, 1862.
	Jay, Alfred T., *et al.* (*See* Morgan, Jay, Edwards & Tilston.)			

35,522	Jeffery, E. A., and J. D. Quackenbush, assignors to J. D. Quackenbush.	Corning, N. Y	Pumps	June 10, 1862.
34,428	Jenckes, Thomas A	Providence, R. I	Fabrics, water-proof	Feb. 18, 1862.
1,338	Jenkins, Henry	Brooklyn, N. Y	Fences, wire (Reissue)	Sept. 2, 1862.
36,586	Jenkins, Jacob, assignor to G. W. Keene, M. W. Shephard, and J. C. Stimpson.	Lynn, Mass	Boots and shoes, machines for preparing heels for	Sept. 13, 1862.
34,146	Jenkins, James, and George H. Cook	Elizabeth, N. J	Ores of zinc, method of working silicious and other calamine.	Jan. 14, 1862.
36,954	Jenkins, James, and Henry Weissenborn	Elizabeth, N. J	Furnaces for roasting ores, and for other purposes	Nov. 18, 1862.
35,760	Jenkinson, James	Brooklyn, N. Y	Bayonet, sliding	July 1, 1862.
37,075	Jenkinson, James, assignor to Jos. Merwin and E. P. Bray.	Brooklyn, N. Y	Fire-arms, revolving	Dec. 2, 1862.
34,889	Jenny, Augustus	New York, N. Y	Washing machine	April 8, 1862.
	Jewett & Root. (*See* Stanard, Walter W., ass'or. Design.)			
	Jewett & Root. (*See* Stanard, Walter W., ass'or. Design.)			
	Jewett & Root. (*See* Stanard, Walter W., ass'or. Design.)			
35,686	Jewett, George B	Salem, Mass	Legs, artificial	June 24, 1862.
35,937	Jewett, George B	Salem, Mass	Legs, artificial	July 22, 1862.
36,409	Johnson, Albert	Putnam, Conn	Water elevators	Sept. 9, 1862.
36,714	Johnson, Edward, jr	Cleveland, Ohio	Stoves, cooking	Oct. 21, 1862.
34,362	Johnson, Frank G	Brooklyn, N. Y	Boats, ice, velocipede	Feb. 11, 1862.
37,134	Johnson, George H., assignor to self and W. S. Sampson	New York, N. Y	Grain bins	Dec. 9, 1862.
	Johnson, G. H. (*See* Sampson, Wm. S., assignor.)			
34,688	Johnson, John Jay	Kalamazoo county, Mich	Tanning process	Mar. 18, 1862.
34,281	Johnson, Josee, assignor to self and John Ward, jr	New York, N. Y	Clothes-wringer	Jan. 28, 1862.
35,735	Johnson, Josee, assignor to self and John Ward, jr	New York, N. Y	Table, ironing	June 24, 1862.
35,612	Johnson, Joseph B	Lynn, Mass	Warming passenger cars	June 17, 1862.
	Johnson, L. J., and J. L. Crowley. (*See* Crowley & Johnson.)			
35,098	Johnson, Ross	Frederick, Md	Ploughs	April 29, 1862.
34,502	Johnson, Wm., and Henry Davies	Brooklyn, N. Y	Ovens, bakers'	Feb. 25, 1862.
35,451	Johnson, Wm. H	Springfield, Mass	Propeller, marine	June 3, 1862.
34,061	Johnson, A. K., and L. Dow	Middletown, Conn	Cartridges for fire-arms, envelopes of	Jan. 7, 1862.
35,687	Johnson, Algernon K., and Lorenzo Dow	New York, N. Y	Cartridges, water-proof, rendering	June 24, 1862.
36,715	Johnson, James J	Allegheny City, Pa	Boots and shoes, wooden soles for	Oct. 21, 1862.
36,843	Johnson, Samuel	Buffalo, N. Y	Harvesters	Nov. 4, 1862.
36,848	Johnson, Samuel	Buffalo, N. Y	Harvesters, corn	Nov. 4, 1862.
35,241	Johnson, William	Cincinnati, Ohio	Fire-arms, breech-loading	June 13, 1862.
34,966	Jones, A. S	Joliet, Ill	Millstone picks	April 15, 1862.
	Jones, E. Hobsin, and Samuel Horsley. (*See* Horsley & Jones.)			
34,967	Jones, George	Peekskill, N. Y	Window-sash adjuster	April 15, 1862.
35,523	Jones, George	Peekskill, N. Y	Fasteners, sash	June 10, 1862.
34,302	Jones, George C	Alna, Me	Shells for ordnance	Feb. 4, 1862.
35,524	Jones, Horatio Ross	Addison, N. Y	Primer, percussion cap for fire-arms	June 10, 1862.
36,158	Jones, Isaac S	Xenia, Ohio	Cultivators	Aug. 12, 1862.
35,001	Jones, J. L., assignor to self and W. D. Porter	St. Louis, Mo	Batteries, water and land, defensive armor for	April 15, 1862.
36,784	Jones, James H	Dayton, Ohio	Separator and smut machines	Oct. 28, 1862.
	Jones, John W. (*See* Winslow, Isaac, assignor.)			
	Jones, John W. (*See* Winslow, Isaac, assignor.)			
	Jones, John W. (*See* Winslow, Isaac, assignor.)			
	Jones, John W. (*See* Winslow, Isaac, assignor.)			
36,007	Jones, Joseph	Utica, N. Y	Car-brakes, railroad	July 29, 1862.
36,495	Jones, Nathaniel, assignor to L. J. Mabie, A. J. Manley, and R. H. Morris.	Homer, N. Y	Shoe lasts	Sept. 16, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
34, 835	Jones, Phineas	Newark, N. J	Dowelling	April 1, 1862.
34, 836	Jones, Tisdle B	Peterson, N. J	Tenoning machines	April 1, 1862.
36, 909	Jones, William	Wilson, Minn	Ploughs	Nov. 25, 1862.
36, 159	Jones. W. M., and S. E. Tyler	Horicon, Wis	Seeding machines	Aug. 12, 1862.
	Jones, Woodruff, and Horace J. Smith. (*See* Smith & Jones.)			
36, 785	Jordan, W. H	Roseville, Ind	Cultivators	Oct. 28, 1862.
35, 420	Joslin, Edward, and Dalphon L. Gibbs, assignors to C. B. Rogers & Co.	Keene, N. H	Mortising machines, hub	May 27, 1862.
34, 503	Joslin, Gilman	Boston, Mass	Heaters	Feb. 25, 1862.
36, 218	Joslin, William	Cleveland, Ohio	Clothes-wringing machines	Aug. 19, 1862.
35, 688	Joslyn, Benjamin F	Stonington, Conn	Fire-arms, breech-loading	June 24, 1862.
36, 958	Joyce, Thomas	Brooklyn, N. Y	Coffee-roasters	Nov. 18, 1862.
36, 410	Jucket, Edmund B	New Haven, Conn	Hose-couplings	Sept. 9, 1862.
35, 761	Judah, Theodore D	Sacramento, Cal	Chairs, spring-back	July 1, 1862.
35, 826	Judd, Allen	Springfield, Mass	Engines, steam	July 8, 1862.
34, 504	Judd, Edward M	New Britain, Conn	Fire-arms, repeating	Feb. 25, 1862.
36, 094	Judd, Edward M	New Britain, Conn	Curtain-fixtures, cord tightener for	Aug. 5, 1862.
37, 098	Judd, Edward M	New Britain, Conn	Car-brakes, railroad	Dec. 9, 1862.
37, 099	Judd, Edward M	New Britain, Conn	Car, railroad, trucks for	Dec. 9, 1862.
34, 837	Judd, Morton	New Britain, Conn	Pictures, screw support for hanging	April 1, 1862.
35, 525	Judd, Oliver S	New Britain, Conn	Lights, gas, means of extinguishing	June 10, 1862.
34, 507	Judkins, C. T	Boston, Mass	Gas regulators	Feb. 25, 1862.
	Judson, Anson, *et al.* (*See* Gallagher, John, assignor.)			
	Jueth, E. (*See* Schalkenbach, Jno. Baptist, assignor.)			
	Justice, Philip S. (*See* Shaw, Thomas, assignor.)			
	Justice, P. S. (*See* Shaw, Thomas, assignor.			
34, 208	Justis, Rannah	Dublin, Ind	Churns	Jan. 21, 1862.
	Kalbach, Harrison, and Abraham Andrews. (*See* Andrews & Kalbach. Reissue.)			
	Karcheski, Xavier, *et al.* (*See* Brecht & Sigesmond, ass'rs.)			
36, 716	Karelsen, J. E	New York, N. Y	Mill-stone dresser	Oct. 21, 1862.
36, 653	Kathan, Charles	Hardin, Iowa	Separators, grain	Oct. 14, 1862.
35, 565	Kavanaugh, Luke, assignor to self and Gage Campbell and Gage.	Waterford, N. Y	Knitting machines, burrs for	June 10, 1862.
	Kaye, Joseph, and N. K. Wade. (*See* Wade & Kaye. Reissue.)			
	Kaye, Joseph, and N. K. Wade. (*See* Wade & Kaye. Reissue.)			
35, 762	Kearney, William and Francis	Union township, N. J	Tongs, pipe	July 1, 1862.
	Keech, Thomas. (*See* Hyde, James, assignor.)			
35, 317	Keeler, Samuel, and Jacob Barthel	Lancaster, Pa	Seeding machines	May 20, 1862.
35, 567	Keeler, Samuel, and Jacob Barthel	Lancaster, Pa	Drills, seed	Sept. 30, 1862.
35, 613	Keene, George A	Newburyport, Mass	Funnels, measuring pendant	June 17, 1862.
36, 095	Keene, George A	Newburyport, Mass	Funnel measures	Aug. 5, 1862.
	Keene, G. W., *et al.* (*See* Jenkins, Jacob, assignor.)			

35, 938	Kehew, William B., and Chas. H. Fifield	Salem, Mass	Hot-air register	July 22, 1862.
34, 956	Keith, Albert	Lisbon, Ill	Grading and excavating machines	Jan. 28, 1862.
36, 437	Keith, Bethuel, Adolph Behr, and Nathaniel Shephard Keith	New York, N. Y	Ores and minerals, process of calcining	Sept. 9, 1862.
37, 170	Keith, Jeremiah	New Bedford, Mass	Shoes, &c., machine for punching and eyeleting	Dec. 16, 1862.
34, 988	Kelling, C. L	Mechanicsburg, Pa	Coffee-roasters	April 15, 1862.
34, 756	Kellogg, C. H. B	Arcadia, Ohio	Washing machine	Mar. 25, 1862.
35, 356	Kellogg, Henry	New Haven, Conn	Fire-arms, breech-loading	May 20, 1862.
35, 878	Kellogg, Henry	New Haven, Conn	Cartridges, metallic	July 15, 1862.
	Kellogg, Henry, and C. O. Crosby. (*See* Crosby & Kellogg.)			
	Kellogg, Henry, and C. O. Crosby. (*See* Crosby & Kellogg.)			
	Kellogg, Henry, and C. O. Crosby. (*See* Crosby & Kellogg.)			
37, 171	Kelly, Daniel	Grand Rapids, Mich	Cartridge-tearer for muskets	Dec. 16, 1862.
37, 196	Kelly, Daniel, assignor to self and Jacob A. Smith	Grand Rapids, Mich	Bits in stocks, method of securing	Dec. 16, 1862.
	Kelly, John H. (*See* Slingerland, John, assignor.)			
35, 764	Kelly, John W	Ypsilanti, Mich	Seeding machines	July 1, 1862.
37, 000	Kelly, Thomas B., and L. W	Hannonsburg, Pa	Tools, blacksmiths'	Nov. 25, 1862.
34, 578	Kelly, William H	Onondaga county, N. Y	Cultivators	Mar. 4, 1862.
34, 505	Kelly, William S	Schenectady, N. Y	Pumps	Feb. 25, 1862.
	Kelly, W. S., and Frederick Dayton. (*See* Dayton & Kelly.)			
34, 489	Kelsey, George R	West Haven, Conn	Buckles, manufacture of	Feb. 18, 1862.
37, 234	Kelsey, John	Yardleyville, Pa	Harrows	Dec. 23, 1862.
1, 604	Kelty, Gibbons L	New York, N. Y	Tassel-tops (Design)	June 10, 1862.
35, 689	Kemper, Elijah	Thorn township, Ohio	Gates	June 24, 1862.
	Kendall, Geo. S., and John E. Daniels. (*See* Daniels & Kendall.)			
34, 209	Kendall, Samuel D	Brooklyn, N. Y	Bridges, truss-girders for	Jan. 21, 1862.
	Kennedy, John H. (*See* Brown, Charles S., assignor.)			
	Kenzil, R. T., & Co. (*See* Armstrong, John, assignor.)			
34, 508	Kent, Hervey	Lewiston, Me	Carding-engines, sliver guides for	Feb. 25, 1862.
	Kent, Joseph. (*See* Brown, J. S., assignor.)			
36, 938	Kenyon, Henry K	Steubenville, Ohio	Projectiles, ordnance, giving rotation to	Nov. 18, 1862.
35, 939	Kenyon, Martin R	Providence, R. I	Lamp chimney-cleaners	July 22, 1862.
34, 989	Kepner, Solomon	Pottstown, Pa	Paddle-wheels	April 15, 1862.
36, 997	Kerr, Hugh	Brooklyn, N. Y	Pipes, tap for tapping	Nov. 11, 1862.
36, 654	Ketcham, Isaac A	Brooklyn, N. Y	Batteries, submarine, apparatus for operating	Oct. 14, 1862.
36, 845	Ketcham, Isaac A	Brooklyn, N. Y	Batteries, submarine or floating, mode of operating	Nov. 4, 1862.
36, 717	Ketcham, A. C	New York, N. Y	Lamp-burners	Oct. 21, 1862.
	Ketcham, Hiram, jr., and Louis F. Theraison. (*See* Seymour, Edward L., assignor.)			
34, 830	Kettell, John P	Worcester, Mass	Hot shell-irons	April 1, 1862.
	Kettler, Edward, and John Eiberweiser. (*See* Eiberweiser & Kettler.)			
35, 377	Kettler, Frederic	Milwaukie, Wis	Boots and shoes, heel for	May 27, 1862.
35, 438	Kettler, Frederic	Milwaukie, Wis	Pumps, rotary	June 3, 1862.
35, 940	Keyser, David	Philadelphia, Pa	Boot-blacking stand	May 13, 1862.
34, 718	Kidder, Francis L., assignor to self and Frederick Hoeft	Brooklyn, N. Y	Cars, ice	Mar. 18, 1862.
35, 736	Kidder, Nelson, assignor to B. F. Linville	Moscow, Ia	Ditching machine	June 24, 1862.
35, 940	Kidney, George H	Cleveland, Ohio	Clothes-wringer	July 22, 1862.
35, 888	Kidney, G. H	Cleveland, Ohio	Washing machine	Sept. 30, 1862.
34, 839	Kimball, John J	Napierville, Ind	Water-wheel	April 1, 1862.
35, 689	Kimball, Nehemiah	Pascoag, R. I	Saw-mills, self-setting head-block for	June 24, 1862.
36, 046	Kindleberger, T. J	Springfield, Ohio	Water-wheels	Nov. 4, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	King & Percy. (*See* Hatfield, John, assignor.)			
34,303	King, A. S	Commerce, Mich	Gas-retorts	Feb. 4, 1862.
34,579	King, Benedikt	Providence, R. I	Cartridges adapted to breech-loading fire-arms	Mar. 4, 1862.
34,692	King, William R	Yellow Spring, Ohio	Evaporating and distilling, apparatus for	Jan. 7, 1862.
35,396	Kingman, John W	North Bridgewater, Mass	Buildings water-proof, mode of making	June 10, 1862.
37,042	Kingsland, Richards	New York, N. Y	Heaters and ventilators for tents	Dec. 2, 1862.
37,043	Kingsland, Richards	New York, N. Y	Stoves, army	Dec. 2, 1862.
35,983	Kingsland, Samuel	Lyndon, Wis	Wood-bending machine	July 22, 1862.
36,468	Kingsley, William	New York, N. Y	Shells, explosive, igniting	Sept. 16, 1862.
37,256	Kinney, Jno. M., assignor to self and Daniel S. Winant	Columbus, Ohio	Skirts, skeleton	Dec. 23, 1862.
34,719	Kinnibergh, John, assignor to William Kinnibergh	Motherwell, Scotland	Moulds, metallic, wash or coating for	Mar. 18, 1862.
35,453	Kinsella, Arthur	Cascades, Wash. Ter	Aerial machines	June 3, 1862.
34,420	Kinsley, Rodolphus A	Springfield, Mass	Fire-arms, tompions for	Feb. 18, 1862.
	Kirby, Josiah	Cincinnati, Ohio	Bungs, machines for cutting (Extension)	Sept. 12, 1862.
	Kirby, W. A., and D. M. Osborne. (*See* Densmore, Byron, assignor.)			
34,465	Kirk, Charles, assignor to Charles Monson and Stillman Moore.	New Haven, Conn	Gas-meters, dry	Feb. 18, 1862.
	Kirk, Henry C. (*See* Tubbs, John C., assignor.)			
34,580	Kirk, Lewis	Reading, Pa	Brick machines	Mar. 4, 1862.
1,362	Kirkham, W. S., assignor to Chas. A. Miller	Bradford, Conn	Locks and latches (Reissue)	Dec. 9, 1862.
36,096	Kitchen, George H	New York, N. Y	Gas, illuminating, portable apparatus for manufacturing	Aug. 5, 1862.
	Kite, John L., and Allen Walton. (*See* Walton & Kite.)			
36,219	Kitson, Richard	Lowell, Mass	Rooms, dust, connected with machines for picking cotton, &c.	Aug. 19, 1862.
34,431	Kline, A	Philadelphia, Pa	Match-safe	Feb. 18, 1862.
	Kline, A. J., and L. N. Muir. (*See* Muir & Kline.)			
35,242	Knapp, Isaac	Medina, N. Y	Canals, stop-dams for	May 13, 1862.
34,432	Knapp, Iverson W	New York, N. Y	Ovens, bakers'	Feb. 18, 1862.
35,691	Knickerbocker, J. H	Philadelphia, Pa	Tubes in tube-sheets, method of securing	June 24, 1862.
1,277	Knight, Henry	Jersey City, N. J	Cement-pipes, moulds for moulding (Reissue)	Feb. 25, 1862.
34,890	Knight, Henry	Jersey City, N. J	Pipes, cement, moulds for	April 8, 1862.
35,243	Knight, Henry	Jersey City, N. J	Pipes, cement, moulds for	May 13, 1862.
35,692	Knight, Henry	Jersey City, N. J	Pipes, cement, machines for moulding	June 24, 1862.
35,763	Knowles, J. P., assignor to himself and H. F. Warren	Lockport, N. Y	Bed-bottom, spring	July 1, 1862.
36,656	Knowles, Lucius J	Warren, Mass	Valves of steam-engines, apparatus for operating	Oct. 14, 1862.
34,861	Knowlton, R., assignor to himself and Jeremiah Laws, jr	Eureka, Ills	Washing machine	April 1, 1862.
35,027	Knox, M. J	Knox's Corners, N. Y	Clothes-frame	April 22, 1862.
	Knox, M. J., and Wm. C. Leach. (*See* Leach & Knox.)			
35,765	Koch, August	Rocktown, Pa	Bridge, draw, self acting	July 1, 1862.
36,655	Koehler, J. W., and Frederick Reichardt	Decatur, Ill	Wind-wheels	Oct. 14, 1862.
34,970	Kolb, George F	Philadelphia, Pa	Camera-obscuras	April 15, 1862.
37,001	Koiloff, Louis	Brooklyn, N. Y	Gates, devices for closing	Nov. 25, 1862.
35,454	Koss, Wm	McGregor, Ia	Trace-fastening	June 3, 1862.
36,411	Krausch, C. W. Theodore	Chicago, Ill	Indicators, engine	Sept. 9, 1862.

34,304	Krebs, Charles W	Baltimore, Md	Supporters and fasteners, sash	Feb. 4, 1862.
35,378	Kreuter, P. L	Bloomington, Ill	Piston-packing	May 27, 1862.
	Kriete, Heinrich, and Joseph Reichman. (*See* Reichman & Kriete.)			
36,412	Kritsch, Jacob	Binghamton, N. Y	Wheels, hubs, &c., securing boxes to	Sept. 9, 1862.
36,008	Kritzer, Henri J	Albion, Mich	Air engine, hot	July 29, 1862.
36,718	Krogh, C., and M. G. Hognes	Krogh ville, Wis	Vessels, sunken, mode of raising	Oct. 21, 1862.
34,637	Krotzer, Amos	Woodville, Ohio	Cloth-dryer	Mar. 11, 1862.
36,413	Kuebler, William, and Henry Belerlein	Philadelphia, Pa	Lamps	Sept. 9, 1862.
35,693	Kühne, Henry	Racine, Wis	Steering and propelling apparatus	June 24, 1862.
	Kulinski, Jno., *et al.* (*See* Brecht & Sigesmond, assignors.)			
37,044	Kurth, Henry	New Lotts, N. Y	Tobacco pipes	Dec. 2, 1862.
34,549	La Baw, George W., assignor to himself and Peter F. Campbell.	Jersey City, N. J	Carriages, wagons, &c., springs for	Feb. 25, 1862.
36,220	La Baw, George W., and Peter F. Campbell	Jersey City, N. J	Carriage springs	Aug. 19, 1862.
	Lacey, John, *et al.* (*See* Furst, Bradley & Lacey.)			
	Ladd, Jesse, and Augustine B. Crosby. (*See* Crosby & Ladd.)			
37,233	Lafreniere, Oliver	New York, N. Y	Boots and shoes	Dec. 23, 1862.
	Lahaye, J. J., and J. Milholland. (*See* Milholland & Lahaye.)			
35,694	Lake, Ezra B., and Jesse S	Absecom, N. J	Telegraphs, circuit-closers for	June 24, 1862.
36,892	Lakin, Taylor D., assignor to himself and Charles Wilder	Hancock, N. H	Yokes, ox	Nov. 4, 1862.
36,657	Lamb, Peter	Cincinnati, Ohio	Car trucks	Oct. 14, 1862.
34,112	Lambert, Thomas S	Peekskill, N. Y	Tourniquet	Jan. 7, 1862.
34,464	Lambert, Thomas S., assignor to Joseph S. Wright	Peekskill, N. Y	Garment, mode of constructing	Feb. 18, 1862.
34,433	Lambert, Thomas S	Peekskill, N. Y	Stoves, camp	Feb. 18, 1862.
34,550	Lambert, Thomas S., assignor to Henry W. Hunt	Peekskill, N. Y	Windows, double	Feb. 25, 1862.
34,930	Lambert, Thomas S	Peekskill, N. Y	Stoves, cooking	April 8, 1862.
34,971	Lambert, Thomas S	Peekskill, N. Y	Bed frames, military and civic	April 15, 1862.
35,028	Lambert, Thomas S	Peekskill, N. Y	Shirts	April 22, 1862.
35,455	Lambert, Thomas S	Peekskill, N. Y	Boilers and tea kettles	Feb. 25, 1862.
1,304	La Mothe, B. J., assignor to the La Mothe Life-Preserving Iron Car Company.	New York, N. Y	Cars, metallic, for railroads (Reissue)	Dec. 16, 1862.
37,236	La Mothe, Bernard J	New York, N. Y	Ships and other navigable vessels, metallic framing for	Dec. 23, 1862.
37,172	Lampleigh, Isaac	Peoria, Ill	Claw-bars	Dec. 16, 1862.
1,328	Landis, David	Lancaster, Pa	Bolts, flour, screen for (Reissue)	Aug. 19, 1862.
34,063	Landis, Israel L	Manheim township, Pa	Jacks lifting	Jan. 7, 1862.
	Landon, Gardner. (*See* Gregory, Willis L., assignor.)			
	Lane & Bodley. (*See* Smith, Samuel R., assignor.)			
	Lane, Joel C., *et al.* (*See* Woodworth, Arad, assignor.)			
37,100	Lane, Thomas	San Francisco, Cal	Diggers, potato	Dec. 9, 1862.
34,210	Langham, Thomas	Philadelphia, Pa	Knitting machines	Jan. 21, 1862.
36,569	Lansing, H. B., and H. W. Grenell	Hudson, Mich	Planters, corn	Sep. 30, 1862.
36,522	Lapham, Allen	Brooklyn, N. Y	Steam trap	Sep. 23, 1862.
36,301	Larrabee, William	Claremont, Iowa	Winnowers, grain	Aug. 26, 1862.
36,658	Lash, John S	Carlisle, Pa	Washing and wringing machines	Oct. 14, 1862.
34,064	Lasher, Daniel	Brooklyn, N. Y	Furnace grates	Jan. 7, 1862.
	Latham, B. T. (*See* Greely, Josiah B., assignor.)			
	Lathrop, Charles C., *et al.* (*See* Quann, William, assignor.)			
34,305	Lathrop, L. B	San José, Cal	Tires, apparatus for shrinking	Feb. 4, 1862.
35,614	Latta, Milton M	Goshen, Ind	Splints, surgical	June 17, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
34,306	Laubenstein, Jonas	Minersville, Pa	Coal screens	Feb. 4, 1862.
36,786	Laughlin, John	Gettysburg, Pa	Whiffletrees, mode of attaching and detaching	Oct. 28, 1862.
35,125	Lawrence, D. Clinton, assignor to Alfred E. Beach	Cedar Falls, Iowa	Balances, spring	April 29, 1862.
37,008	Lawrence, Edgar V	Brooklyn, N. Y	Measures, disk, rotary	Nov. 25, 1862.
35,353	Lawrence, Isaac R	Green Island, N. Y	Horse powers, endless chain	Sep. 2, 1862.
34,434	Lawrence, Richard S	Hartford, Conn	Forging apparatus	Feb. 18, 1862.
	Laws, Jeremiah, jr. (*See* Knowlton, R., assignor.)			
35,695	Lawson, Joseph W	Ann Arbor, Mich	Tires, machines for upsetting	June 24, 1862.
35,421	Leach, George, assignor to himself and Edmund Burke	Elmira, N. Y	Separators, grain	May 27, 1862.
36,221	Leach, William C., and M. J. Knox	Knox Corners, N. Y	Locks	Aug. 19, 1862.
	Learned, Edward, and C. P. Dixon. (*See* Wilson, James G., assignor.)			
34,149	Leavitt, Charles	Cleveland, Ohio	Carriage wheels	Jan. 14, 1862.
1,389	Lebkächen, Adam	Belleville, Ill	Lubricating compound (Reissue)	Aug. 19, 1862.
36,436	Lee, Benjamin F., and Henry A. Alden, assignors to the New York Rubber Company.	New York, N. Y	Hose reels	Sep. 9, 1862.
35,941	Lee, James	Stevens's Point, Wis	Fire-arm, breech-loading	July 22, 1862.
36,719	Leech, W. H	Dunlapville, Ind	Fences, field	Oct. 21, 1862.
36,469	Leedy, John K	Bloomington, Ill	Sugar evaporator	Sep. 16, 1862.
36,767	Lees, John	Racine, Wis	Churns	Oct. 28, 1862.
34,435	Le Ferre, John	Charlestown, Mass	Metal for sheathing ships	Feb. 18, 1862.
34,150	Leffel, James	Springfield, Ohio	Water wheel	Jan. 14, 1862.
	Lefferts, John C. (*See* Martin & Nicholson, assignors.)			
36,222	Leitch, Robert	Baltimore, Md	Cocks, stop, two-way	Aug. 19, 1862.
	Lemercier, Eugene, administrator, &c. (*See* Sellier, Louis Jules.)			
35,099	Lemley, George W	Pavillion, N. Y	Boring seats of buggies, machines for	April 29, 1862.
35,318	Lemman, John	Cincinnati, Ohio	Mortising machines	May 20, 1862.
36,009	Lemuth, William J	Greencastle, Ind	Millstones, balancing	July 29, 1862.
34,307	Leonard, Ira	Lowell, Mass	Railroad chairs	Feb. 4, 1862.
	Leonard, Samuel, and Jno. L. Beers. (*See* Beers & Leonard.)			
35,160	Lepley, A. H., and J. F. J. Cuisinier	Paris, France	Charcoal, animal, for refining sugar, revivifying	May 6, 1862.
34,308	Leslie, James Y	Brooklyn, N. Y	Tobacco holders	Feb. 4, 1862.
	Leslie, Samuel, and Jas. Vincent. (*See* Vincent & Leslie.)			
	Lester, G. S. (*See* Earle, John E., assignor.)			
	Letmate, F. W., and Lewis Francis. (*See* Francis & Letmate.)			
35,456	Leverich, John B	New York, N. Y	Gun-locks, cover for	June 3, 1862.
34,891	Levin, William	St. Louis, Mo	Fuel, apparatus for economizing	April 8, 1862.
37,101	Levy, Mark	New York, N. Y	Gas, illuminating, manufacture of	Dec. 9, 1862.
34,341	Lewis, Benjamin B	Bristol, Conn	Clocks, calendar	Feb. 4, 1862.
35,161	Lewis, C. C	Whitewater, Wis	Soap	May 6, 1862.
37,102	Lewis, Diocleslan	Boston, Mass	Rack, book	Dec. 9, 1862.
36,414	Lewis, George T	Philadelphia, Pa	Zinc, white oxide of, for use in paints, preparation of	Sep. 9, 1862.
36,283	Lewis, John L	Pittsburg, Pa	Gun carriages, pile or	Aug. 19, 1862.
34,892	Lewis, Miles K	Iowa City, Iowa	Carriage brakes	April 8, 1862.
35,527	Lewis, Sylvester	Rochester, N. Y	Oils and fats for rendering them more useful for burning in lamps, lubricating machinery, and other purposes, mode of treating.	June 10, 1862.
	Lewis, William, and John Price. (*See* Price & Lewis.)			
36,720	Libbey, H. W	Cleveland, Ohio	Baths, vapor	Oct. 21, 1862.
35,766	Lights, Ferdinand C	New York, N. Y	Piano-fortes	July 1, 1862.
35,039	Lighthall, William A	New York, N. Y	Condensers, water, portable	April 22, 1862.
35,168	Lighthall, William A	New York, N. Y	Engines, steam, refrigerators for	May 6, 1862.
35,319	Lighthall, William A	New York, N. Y	Water, portable, condensers for making	May 20, 1862.
35,615	Lighthall, William A	New York, N. Y	Engines, steam, circulator for	June 17, 1862.
35,942	Lighthall, William A	New York, N. Y	Boilers, steam	July 22, 1862.
36,010	Lighthall, William A	New York, N. Y	Heater, condenser, and filter, combined	July 29, 1862.
	Lightner, John	Roxbury, Mass	Axle-boxes Extension	Nov. 19, 1862.
	Liliendahl, Gustavus, A., and Thomas W. Roys. (*See* Roys & Liliendahl.)			
36,415	Lind, Adolphus	San Francisco, Cal	Water-wheels	Sept. 9, 1862.
36,618	Lindner, Clarence	Eden Township, Ill	Bed, atmospheric, (or air,) and knapsack	Oct. 7, 1862.
37,173	Lindner, Edward	New York, N. Y	Guns, air	Dec. 16, 1862.
	Lindergreen, N. P. (*See* Lofvendahl, J., assignor.)			
36,639	Lines, William	Rochester	Coal-sifters	Oct. 14, 1862.
	Linville, B. F. (*See* Kidder, Nelson, assignor.)			
34,183	Linville, J. H., assignor to himself and J. L. Piper	Altoona, Pa	Bridges, truss, iron	Jan. 14, 1862.
	Liquid Quartz Company. (*See* Vanderburgh, George E., assignor.)			
	Liquid Quartz Company. (*See* Vanderburgh, George E., assignor. Reissue.)			
	Littlefield, Dennis G. (*See* Easterly, James, assignor.)			
1,303	Littlefield, Dennis G	Albany, N. Y	Furnaces, hot-air (Reissue)	April 22, 1862.
1,329	Littlefield, Dennis G	Albany, N. Y	Stoves (Reissue)	Aug. 26, 1862.
1,333	Littlefield, Dennis G	Albany, N. Y	Stoves (Reissue)	Aug. 26, 1862.
1,334	Littlefield, Dennis G	Albany, N. Y	Stoves (Reissue)	Aug. 26, 1862.
1,335	Littlefield, Dennis G	Albany, N. Y	Stoves (Reissue)	Aug. 26, 1862.
37,103	Littlefield, Dennis G	Albany, N. Y	Stoves (Reissue)	Aug. 26, 1862.
34,113	Littlejohn, Hiram	Troy, N. Y	Stoves	Dec. 9, 1862.
	Livingston, John L., and John B. Shaffer. (*See* Boyes, William, assignor.)		Clothes frame	Jan. 7, 1862.
35,767	Livingston, M. M	Brooklyn, N. Y	Netting to windows, mode of applying	July 1, 1862.
35,696	Lloyd, Gordon W	Detroit, Mich	Lights, feet, for theatres, mode of constructing and arranging.	June 24, 1862.
34,840	Lloyd, Nathaniel, and John G. Dale	Church, Eng	Dyeing and printing with aniline colors	April 1, 1862.
34,979	Lobdell, George G	Wilmington, Del	Car wheels, cast metals	April 15, 1862.
1,317	Lobdell, George G	Wilmington, Del	Car wheels, cast metal (Reissue)	June 17, 1862.
	Locke, Jesse, Albert. (*See* Muir, George W., assignor.)			
34,809	Lockwood, Edmund	Ulster, Pa	Shot-hole stopper	Feb. 25, 1862.
36,384	Lockwood, George W., assignor to Horace Carpenter & Co.	New York, N. Y	Skirts, skeleton	Sept. 2, 1862.
34,757	Lowenberg, Henry	Boston, Mass	Composition for manufacture of mouldings and other purposes.	Mar. 25, 1862.
35,163	Lowenberg, Henry	Boston, Mass	Button-holes, mode of making	May 6, 1862.
36,097	Lowenberg, Henry	Boston, Mass	Fabric for hats and bonnets	Aug. 5, 1862.
37,003	Lowenberg, Henry	New York, N. Y	Skirts, hoop	Nov. 25, 1862.
34,397	Lofvendahl, J., assignor to himself and N. P. Lindergreen	Boston, Mass	Spool-holding devices	Feb. 11, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35,164	Logan, Samuel M., and Philo E. Baker	New Carlisle, Ohio	Roofing, terra-cotta	May 6, 1862.
35,979	Lombert, Herman J	Philadelphia, Pa	Rails to railroads, mode of constructing and applying	July 15, 1862.
	London, Wm. E., and Wm. H. Doane. (*See* Doane & London.)			
36,654	Long, Charles B., assignor to himself, Augustus Rice, and Jonathan Lather.	Worcester, Mass	Ordnance, device for indicating the elevation of	July 29, 1862.
37,076	Long, Charles B., assignor to himself, Augustus Rice, and Jonathan Lather.	Worcester, Mass	Ordnance, adjustable sight for	Dec. 2, 1862.
34,883	Long, Josiah	Leavenworth, Ind	Ploughs, cutter attachment to	April 8, 1862.
1,253	Long, Robert H	Philadelphia, Pa	Engines, steam, for propelling street passenger cars, arrangement of. (Reissue.)	Jan. 7, 1862.
1,254	Long, Robert H	Philadelphia, Pa	Engines, steam, for propelling street passenger cars, arrangement of. (Reissue.)	Jan. 7, 1862.
37,135	Long, Samuel N., assignor to the Chatham Lock Company	South Chatham, Mass	Locks	Dec. 9, 1862.
36,160	Longett, Alexis	New York, N. Y	Velocipedes	Aug. 12, 1862.
34,418	Longyear, Jacob	Grass Lake, Mich	Boring machine	Feb. 18, 1862.
34,151	Loper, Richard F	Philadelphia, Pa	Ships, iron, and other navigable vessels, means of covering and repairing.	Jan. 14, 1862.
	Lord, John M. (*See* Thomas, John, assignor.)			
	Lorenz, A. (*See* Core, W. H., assignor. Design.)			
	Lorenz, A., and W. H. Core. (*See* Hesdra, Constant, assignor. Design.)			
34,510	Loring, Samuel	Duxberry, Mass	Leathering tacks, machines for	Feb. 25, 1862.
35,528	Louis, Lafayette	Buffalo, N. Y	Pianos with melodeon attachment	June 10, 1862.
35,737	Louis, Lafayette, assignor to George A. Prince and Thomas Stephenson.	Buffalo, N. Y	Melodeons	June 24, 1862.
36,698	Loveless, C. B	Syracuse, N. Y	Grates	Aug. 5, 1862.
35,880	Low, Andrew J	German Township, Pa	Saccharine juices, portable apparatus for evaporating.	July 15, 1862.
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
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List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
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	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
	Lowell Manufacturing Company. (*See* Ney, Elemir J., assignor. Design.)			
35,100	Lowrey, Robert O	Saratoga Springs, N. Y	Wind mills	April 29, 1862.
	Lowth, M. F., and John S. Rowell. (*See* Rowell & Lowth.)			
	Lowth, M. F., and John S. Rowell. (*See* Rowell & Lowth.)			
35,101	Lucecock, J., and J. M. Gowdy	Peoria, Ill	Churns	April 29, 1862.
34,257	Luckett, E. M	Philadelphia, Pa	Railroad tracks, mode of cleaning snow from	Jan. 28, 1862.
34,973	Luckey, A. J	Bradford, Wis	Grain, machines for cutting the bands of	April 15, 1862.
	Ludden, Wm. A., and Wm. C. Vosburgh. (*See* Vosburgh & Ludden.			
35,827	Luse, D. F. and A. P	Spring Mills, Pa	Stump-extractor	July 8, 1862.
	Lusty, James, and George Taylor. (*See* Taylor & Lusty. (Design.)			
	Luther, Jonathan, *et al.* (*See* Long, Charles B., assignor.)			
	Luther, Jonathan, *et al.* (*See* Long, Charles B., assignor.)			
	Lux, Joseph. (*See* Rusch, Joseph, assignor.)			
34,758	Lyman, Alfred E	Williamsburg, Mass	Candlesticks	Mar. 25, 1862.
36,660	Lyman, Alfred E	Williamsburg, Mass	Coffins, ventilating	Oct. 14, 1862.
34,581	Lyman, Asel Storrs	New York, N. Y	Paper pulp, process of separating the fibres of wood and other substances for the manufacture of.	Mar. 4, 1862.
36,354	Lyman, Asel S	New York, N. Y	Milk, apparatus for concentrating	Sept. 2, 1862.
35,102	Lyman, William J., and Alfred E	East Hampton, Mass	Coffins	April 29, 1862.
35,429	Lyman, Wm. W., assignor to himself and Saml. M. Wead	Malone, N. Y	Cultivators	May 27, 1862.
35,529	Lyman, William W	West Meriden, Conn	Can, fruit	June 10, 1862.
1,617	Lyman, William W	West Meriden, Conn	Can, fruit (Design)	Aug. 5, 1862.
34,258	Lynch, Edward	Buffalo, N. Y	Tents, attaching beds to	Jan. 28, 1862.
34,759	Lynde, John D	Philadelphia, Pa	Bottle stopper	Mar. 25, 1862.
34,894	Lynde, John D	Philadelphia, Pa	Aerated liquids, bottle for	April 8, 1862.
	Lyon, George. (*See* Thatcher, John, assignor.)			
34,437	Lyon, Henry	Brooklyn, N. Y	Boots and shoes, cork sole for	Feb. 18, 1862.
35,030	Lyon, James W	Brooklyn, N. Y	Padlocks	April 22, 1862.
36,224	Lyon, James W	Brooklyn, N. Y	Locks	Aug. 19, 1862.
	Lyon, Joshua R., and Jehiel Munson. (*See* Munson & Lyon.)			
	Lyon, Samuel H., and Robert T. Wilde. (*See* Wilde & Lyon.)			
37,045	Mabbett, John H	Mechanicsville, N. Y	Railroad chairs	Dec. 2, 1862.
35,943	Mabbett, W. S	Calverton Mills, Md	House preserving	July 29, 1862.
	Mable, L. J., *et al.* (*See* Jones, Nathaniel, assignor.)			
34,582	Mackenzie, P. W., assignor to Addison Smith	Jersey City, N. J	Gas compensator	Mar. 4, 1862.
36,161	Mackenzie, P. W	Jersey City, N. J	Propellers, centering	Aug. 12, 1862.
34,438	Mackerley, M. M	South Salem, Ohio	Planter, corn and lime spreader combined	Feb. 18, 1862.
37,046	Mackey, Alexander, and John W. Jarboe	New York, N. Y	Sugar, dip pots for refining	Dec. 2, 1862.
34,720	Mackinney, Eugene C., assignor to himself and James H. Powell.	Peeksville, N. Y	Harness reins, device for holding	Mar. 18, 1862.
34,158	Mackintire, James W	Woburn, Mass	Stalls for horses	Jan. 14, 1862.
36,908	Macneale, Neil, and William B. Dodds	Cincinnati, Ohio	Locks	Nov. 11, 1862.
35,881	Madden, Michal	St. Louis, Mo	Hydraulic presses, retainer for	July 15, 1862.
36,847	Maddock, Stephen J	Cincinnati, Ohio	Sewing machines, braiding guide for	Nov. 4, 1862.
35,000	Magee, John, assignor to Norton Furnace Company	Chelsea, Mass	Stoves, cooking	April 15, 1862.
1,355	Magee, John, assignor to himself and William J. Towne	Chelsea, Mass	Stoves, ventilating dampers for (Reissue)	Nov. 18, 1862.
1,356	Magee, John, and William J. Towne	Chelsea, Mass	Stoves (Reissue)	Nov. 18, 1862.
37,027	Magee, John, assignor to the Norton Furnace Company	Chelsea, Mass	Heaters	Nov. 25, 1862.
	Mager, John. (*See* Walker, George W., assignor.)			
35,167	Maher, Edmund	New York, N. Y	Fire-arms, repeating	May 6, 1862.
1,570	Maker, Nathan P	Pawtucket, R. I	Crucifix (Design)	April 29, 1862.
35,879	Mallette, George B	Millport, N. Y	Washing-machine	May 27, 1862.
1,276	Mallory, George	Watertown, N. Y	Skirts, hoop (Reissue)	Feb. 18, 1862.
	Mallory, James E., and Gelston Sanford. (*See* Sanford & Mallory.)			
	Mallory, James E., and Gelston Sanford. (*See* Sanford & Mallory.)			
	Mallory, James E., and Gelston Sanford. (*See* Sanford & Mallory.)			
	Mallory, James E., and Gelston Sanford. (*See* Sanford & Mallory.)			
	Mallory, James E., and Gelston Sanford. (*See* Sanford & Mallory.)			
	Mallory, James E., and Gelston Sanford. (*See* Sanford & Mallory.)			
	Mallory, James E., *et al.* (*See* Sanford, Mallory & Hayes.)			
36,099	Mallory, W. H	New York, N. Y	Sail, fan-shaped	Aug. 5, 1862.
34,511	Manahan Francis X	Utica, N. Y	Cheese vats	Feb. 25, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	Manigle, E. M. (*See* Holzer, Julius, assignor. Design.)			
	Manley, A. J., *et al.* (*See* Jones, Nathaniel, assignor.)			
35,697	Manley, William R	New York, N. Y	Paddle-wheel, feathering	June 30, 1862.
35,480	Mann, Harvey	Bellefont, Pa	Axes	June 3, 1862.
35,427	Mann, Michael	Syracuse, N. Y	Fuel, artificial	May 27, 1862.
35,457	Manning Edward B	Cromwell, Conn	Pots, tea and coffee	June 3, 1862.
	Manning, Joseph C. (*See* Bradford, John S., assignor.)			
	Manning, N. A., and Daniel S. Gardner. (*See* Gardner & Manning.)			
34,760	Manny, John P	Rockford, Ill	Harvesters	Mar. 25, 1862.
34,761	Manny, John P	Rockford, Ill	Harvesters	Mar. 25, 1862.
34,762	Manny, John P	Rockford, Ill	Harvesters	Mar. 25, 1862.
34,763	Manny, John P	Rockford, Ill	Mowing machines	Mar. 25, 1862.
	Manny, Mary. (*See* Holly, Solomon T., assignor.)			
34,764	Mansfield, Martin H	Ashland, Ohio	Clover machine	Mar. 25, 1862.
35,103	Mansfield, William Jedediah Morse, and H. H. Mansfield	Canton, Mass	Projectiles for ordnance, &c	April 29, 1862.
34,088	Marble, Lansing, assignor to himself and Townsend North	Vissar, Mich	Baskets	Jan. 7, 1862.
36,055	March, Henry C., assignor to himself and Henry Sisler	Lawrenceville, Pa	Grates, stove	July 29, 1862.
36,416	Marcher, Robert J	New York, N. Y	Composition ornaments used for picture or mirror frames and architectural purposes, &c., device for cutting.	Sept. 9, 1862.
1,549	Marcy, John J., assignor to Edward Miller	Meriden, Conn	Lantern (Design)	Mar. 18, 1862.
37,047	Marcy, John J	Meriden, Conn	Lamp burners	Dec. 2, 1862.
36,523	Markillie, Thomas R	Winchester, Ill	Washing machine	Sept. 25, 1862.
36,619	Marks, Joseph, and Richard Eaton	Hamilton, Canada	Spark arrester	Oct. 7, 1862.
34,114	Marschall, Theodore	New York, N. Y	Piano-fortes	Jan. 7, 1862.
36,225	Marsh, Isaac, jr., and Griggs	Milton, Pa	Roofing, tile	Aug. 19, 1862.
36,661	Marsh, W. W	St. Louis, Mo	Water by steam, device for raising	Oct. 14, 1862.
35,107	Marshall, J. Plymton	Millbury, Mass	Fire-arms, breech-loading	April 29, 1862.
35,031	Marshall, J. S	West Greenville, Pa	Beehives	April 22, 1862.
34,115	Marshall, Loomis G	San Francisco, Cal	Amalgamator	Jan. 7, 1862.
34,370	Marshall, Moses	Lowell, Mass	Pegging boots and shoes, machines for	Feb. 11, 1862.
1,296	Marshall, Moses, assignor to S. S. Bucklin	Lowell, Mass	Pegging machines (Reissue)	Mar. 25, 1862.
37,137	Marshall, Moses, assignor to S. S. Bucklin	Lowell, Mass	Pegging boots and shoes, machine for	Dec. 9, 1862.
36,226	Marshall, Samuel	Wilmington, Del	Lamps	Aug. 19, 1862.
1,697	Marshbank, John D., assignor to himself and William McConkey.	Lancaster, Pa	Stove (Design)	Dec. 16, 1862.
37,257	Martin, Benjamin Green, assignor to Jerome Buck	New York, N. Y	Ordnance, to facilitate unspiking, divided vent bushing for	Dec. 23, 1862.
	Martin, George P., and John Copeland. (*See* Copeland & Martin.)			
34,259	Martin, Jacob	Mound City, Ill	Valve, slide, of pressure, relieving	Jan. 28, 1862.
1,353	Martin, James F., and Henry C. Nicholson, assignors to John C. Lefferts.	New York, N. Y	Cans, preserve (Reissue)	Nov. 4, 1862.
	Martin, James W., and Anson Warren. (*See* Warren & Martin.)			
35,278	Martin, John M., assignor to himself and Myers, Uhl & Co.	Cleveland, Ohio	Monuments, construction of	May 13, 1862.
36,227	Martin, Michael J	Belleville, Ill	Stump-extractors	Aug. 19, 1862.
35,698	Martin, Richard	Brooklyn, N. Y	Pistons and valve rods, packing for	June 24, 1862.
	Martin, Warrick, *et al.* (*See* Ambler, A. J., assignor.)			
	Martin, Warrick, *et al.* (*See* Ambler, A. J., assignor.)			
	Martin, Warrick, *et al.* (*See* Ambler, A. J., assignor.)			
	Martin, Warrick, *et al.* (*See* Ambler, A. J., assignor.)			
	Martin, W., *et al.* (*See* Ambler, Augustine J., assignor.)			
35,349	Martine, Charles F., assignor to himself and Rufus H. Emerson.	Dorchester, Mass	Lamps	May 20, 1862.
1,607	Martino, John, and James Horton, assignors to Stuart & Peterson.	Philadelphia, Pa	Stove, cook's (Design)	June 17, 1862.
	Mason & Hamlin. (*See* Wood, George, assignor.)			
34,153	Mason, Benjamin A	Newport, R. I	Projectiles for fire-arms, casting	Jan. 14, 1862.
35,423	Mason, Benjamin A., assignor to Sarah J. Mason	Newport, R. I	Screws, wood, machine for threading	May 27, 1862.
	Mason, H. H. & A. C., *et al.* (*See* Bull, Thos. C., assignor.)			
34,371	Mason, James R	Elgin, Ill	Ploughs	Feb. 11, 1862.
	Mason, Joshua, and J. E. Van Winkle. (*See* Van Winkle & Mason.)			
35,201	Mason, Josiah, assignor to E. C. & J. H. Pratt	Birmingham, G. B	Pens, &c., boxes, cases and cards for	May 6, 1862.
36,321	Mason, Samuel, assignor to Northfield Knife Company	Northfield, Conn	Knives, pocket	Aug. 26, 1862.
34,512	Mason, William	Providence, R. I	Shafting, connecting and disconnecting	Feb. 25, 1862.
34,513	Mason, William M	Polo, Ill	Hay, machines for stacking	Feb. 25, 1862.
	Mast, P. P., and J. H. Thomas. (*See* Thomas & Mast.)			
	Mathies, Robert H., and Gordon McKay. (*See* McKay & Mathies.)			
35,708	Mathew, David	Philadelphia, Pa	Boilers, steam	July 1, 1862.
36,417	Matthews, C. B	Oquawka, Ill	Lamp burners	Sept. 9, 1862.
36,011	Matthews, William	New York, N. Y	Photographic albums	July 29, 1862.
34,805	Matthews, William H., assignor to Williams & Co	Chelsea, Mass	Lamp shade holder	Mar. 25, 1862.
35,061	Matthews, William H., assignor to Union Glass Company	Chelsea, Mass	Lamps, glass deflectors for	April 22, 1862.
35,458	Mattson, Morris	Boston, Mass	Baths, douche	June 3, 1862.
35,459	Maxheimer, John	New York, N. Y	Bird cages	June 3, 1862.
35,390	May, Edwin	Indianapolis, Ind	Bullets, apparatus for casting	May 20, 1862.
35,862	May, George T	Tompkinsville, N. Y	Masts and rigging	July 15, 1862.
35,944	May, George T	Tompkinsville, N. Y	Sails, gaff	July 22, 1862.
	May, John M. (*See* Perkins, A. H., assignor.)			
34,309	Mayall, Thomas J	Roxbury, Mass	Rubber, waste, restoring	Feb. 4, 1862.
1,288	Mayall, Thomas J., assignor to John H. Cheever	Roxbury, Mass	Composition for the manufacture of emery sticks and wheels. (Reissue.)	Mar. 18, 1862.
1,289	Mayall, Thomas J., assignor to John H. Cheever	Roxbury, Mass	Composition for the manufacture of flexible polishing sticks and wheels. (Reissue.)	Mar. 18, 1862.
36,056	Mayall, Thomas J., assignor to Cyrus Wakefield	Boston, Mass	Ratan machinery	July 29, 1862.
36,057	Mayall, Thomas J., assignor to Cyrus Wakefield	Boston, Mass	Ratan machinery	July 29, 1862.
36,058	Mayall, Thomas J., assignor to Cyrus Wakefield	Boston, Mass	Ratan machinery	July 29, 1862.
37,004	Mayall, Thomas J	Roxbury, Mass	Fire-arms, revolving	Nov. 25, 1862.
35,699	Mayberry, J. C	White Rock, Ill	Cartridges	June 24, 1862.
34,896	Maydole, David	Norwich, N. Y	Skate-fastening	April 8, 1862.
36,470	Maydole, David	Norwich, N. Y	Skate-fastening	Sept. 16, 1862.
37,104	Maydole, David	Norwich, N. Y	Skates	Dec. 9, 1862.
	Mayhew, Jonathan, and Thomas S. Ray. (*See* Cleveland, S. E., assignor.)			
34,065	Mayhew, T	Poughkeepsie, N. Y	Lamps	Jan. 7, 1862.

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37, 141	Maynard, Elbert S	Hancock, N. Y	Sleigh-brake	Dec. 9, 1862.
36, 418	Maynard, J. F	Nashua, N. H	Spinning-fliers	Sept. 9, 1862.
35, 530	McAleer, C. H., and J. Shively	Canton, Ohio	Faucets, weighing	June 10, 1862.
34, 583	McAlhatten, Bernard F	New York, N. Y	Bed for ships and hospitals	Mar. 4, 1862.
	McAlpine, C. L., and Charles Pontez. (*See* Pontez & McAlpine.)			
35, 380	McCabe, Edward R	Rochester, Iowa	Ordnance, breech-loading	May 27, 1862.
34, 154	McCain, Robert	Rootstown, Ohio	Cutters, feed	Jan. 14 1862.
37, 137	McCall, John, and Bevan G. Sloper, assignors to C. J. & W. J. Underwood.	Houndsditch, London, England	Food, articles of, preserving	Dec. 9, 1862.
	McClave, John, *et al.* (*See* Morgan, Tyler & McClave.)			
35, 531	McClelland, Robert W	Springfield, Ill	Carriage, wheels, hubs, and journals for	June 10, 1862.
34, 310	McClench, George B	Hollowell, Me	Hydraulic-engines, valve for	Feb. 4, 1862.
36, 471	McClinton, Hugh	Morrow county, Ohio	Sorghum juice, apparatus for evaporating and defecating	Sept. 16, 1862.
34, 116	McCluskey, J	Milwaukie, Wis	Vessels, enemies', apparatus for submarine attack on	Jan. 7, 1862.
	McConkey, William. (*See* Marshbank, John D., assignor.)			
37, 174	McCoonell, William	Philadelphia, Pa	Ash-sifters	Dec. 16, 1862.
1, 255	McCormick, L. J., William S. and Cyrus H. McCormick, assignors to Cyrus H. McCormick.	Chicago, Ill	Reaping and mowing machines (Reissue)	Jan. 7, 1862.
1, 256	McCormick, L. J., William S. and Cyrus H. McCormick, assignors to Cyrus H. McCormick.	Chicago, Ill	Reaping and mowing machines (Reissue)	Jan. 7, 1862.
34, 515	McCoy, Elisha B	Winsted, Conn	Photographs, &c., roller-press for	Feb. 25, 1862.
36, 960	McCreary, J. A	Brooklyn, N. Y	Blind slats, device for holding	Nov. 18, 1862.
34, 516	McCuen, Nelson	South Potsdam, N. Y	Harrows	Feb. 25, 1862.
36, 256	McCurdy, James S., assignor to Wheeler & Wilson Manufacturing Company.	Brooklyn, N. Y	Sewing machines	Aug. 19, 1862.
	McCurdy, Park & Co. (*See* Powe, Lewis, assignor.)			
34, 514	McDaniel, Ira	Salem, Iowa	Washing machine	Feb. 25, 1862.
34, 155	McDonough, Thomas	Middletown, Conn	Air engines, hot	Jan. 14, 1862.
35, 769	McDougall, S. T	Brooklyn, N. Y	Stoves, gas	July 1, 1862.
35, 770	McDougall, S. T	Brooklyn, N. Y	Washing machine	July 1, 1862.
1, 605	McDowell, William L	Philadelphia, Pa	Stove (Design)	June 17, 1862.
1, 606	McDowell, William L	Philadelphia, Pa	Stove (Design)	June 17, 1762.
36, 662	McDowell, William L	Philadelphia, Pa	Grates for stoves	Oct. 14, 1862.
36, 663	McElroy, Samuel	New York, N. Y	Hydrants	Oct. 14, 1862.
34, 117	McEvoy, John	New York, N. Y	Knapsacks, hospital	Jan. 7, 1862.
	McFarlan, Henry. (*See* Butterworth, Joshua H., assignor.)			
36, 012	McFarland, T. W	Ottawa, Ill	Saccharine juices, evaporator for	July 29, 1862.
34, 974	McFarlane, Alexander	South Gennessee, Wis	Lands, marshy, device for cutting	April 15, 1862.
35, 771	McGaffey, Ives W	Chicago, Ill	Planters, seed	July 1, 1862.
36, 788	McGinniss, C	Chicago, Ill	Smut and separator machines	Oct. 28, 1862.
36, 844	McGowan, Theodore J	Cincinnati, Ohio	Pumps	Nov. 4, 1862.
	McGrath, R. M., and J. Hubler. (*See* Hubler & McGrath.)			
34, 311	McGuffie, A	Rochester, N. Y	Bridges, truss-girders for	Feb. 4, 1862.
34, 765	McGuffie, A	Rochester, N. Y	Bridges, truss	Mar. 25, 1862.
35, 381	McGuffie, A	Rochester, N. Y	Bridges, truss	May 27, 1862.
36, 910	McGuire, James H	Rochester, N. Y	Skates	Nov. 11, 1862.
36, 472	McIntire, Charles	Easton, Pa	Culverts	Sept. 16, 1862.
	McIntosh, W. H. (*See* Crawford, James, assignor.)			
36, 664	McIntyre, James	New York, N. Y	Shells, explosive, compound	Oct. 14, 1862.
35, 105	McKay, Gordon	Boston, Mass	Boots and shoes	April 29, 1862.
35, 165	McKay, Gordon	Boston, Mass	Boots and shoes, process of sewing the soles of	May 6, 1862.
36, 163	McKay, Gordon, and Robert H. Mathies	Boston, Mass	Sewing machines	Aug. 12, 1862.
37, 237	McKee, Frederick	Pittsburg, Pa	Lamp wicks	Dec. 23, 1862.
36, 849	McKee, James C	Urbana, Ill	Saccharine liquids, evaporator for	Nov. 4, 1862.
36, 473	McKenna, John, assignor to himself, Alexander and Thos. McKenna.	Pittsburg, Pa	Faucets	Sept. 16, 1862.
36, 981	McKinnell, John, assignor to John Hyslop	London, England	Ventilating apparatus	Nov. 18, 1862.
34, 439	McKinney, Almeron	Maumee City, Ohio	Harrows	Feb. 18, 1862.
36, 013	McKenzie, James, and J. C. Millar	Troy, N. Y	Fulling mills	July 29, 1862.
35, 108	McKenzie, W. V	Jersey City, N. J	Presses, oil	May 6, 1862.
34, 975	McKissick, A., and Charles M. French	Jordan, N. Y	Feathers, apparatus for renovating	April 15, 1862.
	McKissick, William. (*See* Head, Smith, assignor.)			
35, 616	McKown, George	Altona, Ill	Tires, machines for upsetting	June 17, 1862.
34, 086	McLain, John	St. Mary, Ohio	Fan, automatic	Jan. 7, 1862.
	McLaren, Daniel. (*See* Brown, Joseph M., assignor.)			
35, 888	McLaughlin, John	Monongahela City, Pa	Straw-cutters	July 8, 1862.
35, 944	McNair, Alexander	Newark, N. J	Cars for street railways, running-gear of	May 13, 1862.
35, 566	McNamee, Jas., assignor to himself and Henry F. Steckel	Easton, Pa	Registers for bar-rooms	June 10, 1862.
35, 983	McNary, William H	Brooklyn, N. Y	Motion, converting	July 15, 1862.
34, 372	McNeil, Gordon	Chesnut Hill, Pa	Clothes-dryer	Feb. 11, 1862.
35, 889	McPherson, J. L	Sacramento City, Cal	Pumps	July 8, 1862.
	McShane, Henry. (*See* Bailey, Edwin, assignor.)			
34, 895	Meacham, George A	New York, N. Y	Button-fastener	April 8, 1862.
34, 897	Meacham, George A	New York, N. Y	Buttons	April 8, 1862.
36, 100	Meacham, George A	New York, N. Y	Suspender-fastenings	Aug. 5, 1862.
35, 321	Mead, John H	New York, N. Y	Washstands, &c., soap-cups for	May 20, 1862.
34, 156	Mead, Marwin	Battle Creek, Mich	Tire-upsetting machines	Jan. 14, 1862.
35, 169	Mead, Matthias, assignor to Samuel Randall	Lowell, Mass	Cotton rovings, drawing-cans for	May 6, 1862.
34, 394	Mears, John H	Oshkosh, Wis	Harvesters, rakes for	Mar. 4, 1862.
35, 653	Mears, John H., assignor to self and Thomas Ward	Oshkosh, Wis	Harvesters, rakes for	June 17, 1862.
34, 285	Mefford, David M	Cincinnati, Ohio	Projectiles for fire-arms	Jan. 28, 1862.
36, 721	Meigs, Josiah V	Washington, D. C	Fire-arms, breech-loading	Oct. 21, 1862.
35, 945	Meigs, William	Waynesville, Ohio	Harvesters	July 22, 1862.
36, 014	Meissner, Julius H	Jersey City, N. J	Bolts	July 29, 1862.
	Mellier, M. A. C., and Theodore Coupier. (*See* Coupier & Mellier. Reissue.)			
35, 945	Mellinger, B. S., Mellinger, jr., and J. Mellinger	Mount Pleasant, Pa	Rakes, horse	May 13, 1862.
36, 961	Mellinger, B. S., jr., and J	Mount Pleasant, Pa	Rakes, horse	Nov. 18, 1862.
36, 162	Mellinger, Melchor	Dayton, Ohio	Clothes-washing machines	Aug. 12, 1862.
34, 536	Mentzel, William, and Alexander and J. W. Geddes	Baltimore, Md	Lamps	Mar. 11, 1862.
36, 015	Merriam, George P	Lynn, Mass	Boots and shoes, heels of, machines for forming, smoothing, and polishing	July 29, 1862.
34, 517	Merrick, J. Vaughan	Philadelphia, Pa	Valve slide for steame-engines	Feb. 25, 1862.
34, 898	Merrill, Daniel	Worcester, Mass	Ventilators for railroad cars	April 8, 1862.
34, 211	Merrill, Lowell G	Angels, Cal	Ships or other wooden substances under water, mode of chopping to pieces	Jan. 21, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35,532	Merrill, J. W., and J. H. Rowe	Boston, Mass	Warming apparatus, feet	June 10, 1862.
35,382	Merrill, Rufus Milton	Chicago, Ill	Lamp, lantern	May 27, 1862.
36,510	Merrill, R. M	Chicago, Ill	Lamps, lantern	Sept. 30, 1862.
35,460	Merrill, Rufus S	Lynn, Mass	Lamps, coal-oil and other	June 3, 1862.
35,533	Merrill, W. O. B	Philadelphia, Pa	Burners, coal-oil	June 10, 1862.
35,534	Merrill, W. O. B	Philadelphia, Pa	Lamps, coal-oil for railway cars	June 10, 1862.
35,535	Merrill, W. O. B	Philadelphia, Pa	Lamp chimneys	June 10, 1862.
35,772	Merritt, Benjamin, and Frederick M. Gibson	Chelsea, Mass	Windlasses, ships', mechanism for operating	July 1, 1862.
36,228	Merritt, Benjamin, jr	Chelsea, Mass	Leather, machine for pebbling or embossing	Aug. 19, 1862.
35,424	Merritt, Chester, assignor to self and Daniel D. Whitker	Rutland, Vt	Weather-strips for doors	May 27, 1862.
34,212	Merritt, F. S	New York, N. Y	Ranges, cooking	Jan. 21, 1862.
	Mervine, Samuel P. (*See* Schatt, John, assignor.)			
	Merwin, Joseph, and E. P. Bray. (*See* Jenkinson, James, assignor.)			
34,609	Messenger, C	Warren, Ohio	Clothes-wringer	Mar. 11, 1862.
34,157	Metcalf, Martin	Grand Rapids, Mich	Bee-hives, comb frames for	Jan. 14, 1862.
	Metropolitan Washing Machine Company. (*See* Bailey & Couch, assignors.)			
	Metropolitan Washing Machine Company. (*See* Dickerman, Elliot, assignor.)			
36,496	Mets, Elisha, assignor to self and P. M. Bromley	Rochester, N. Y	Table, extension	Sept. 16, 1862.
	Mettam, Charles. (*See* Nowlan, Samuel, assignor. Reissue.)			
36,192	Meucci, Antonio, assignor to Antonio Janó	Clifton, N. Y	Lamps, kerosene (Reissue)	Aug. 12, 1862.
36,419	Meucci, Antonio	Clifton, N. Y	Treating petroleum and other oils, to produce a vehicle for paints and varnishes.	Sept. 9, 1862.
34,689	Meyer, C	New Brunswick, N. J	Boots and shoes	Mar. 18, 1862.
36,909	Meyer, Joseph	Linden Hall, Pa	Ploughs, cultivator	Nov. 11, 1862.
1,540	Meyer, Victor, assignor to Alden, Sampson & Sons	New York, N. Y	Floor-cloth pattern (Design)	Feb. 18, 1862.
	Migeon, Henry. (*See* Bandelot, Jean Louis, assignor. Reissue.)			
	Migeon, Henry. (*See* Bandelot, Jean Louis, assignor. Reissue.)			
	Migeon, Henry. (*See* Bandelot, Jean Louis, assignor. Reissue.)			
37,048	Milbank, Isaac M	Greenfield Hill, Conn	Fire-arms, breech-loading	Dec. 2, 1862.
35,536	Miles, Franklin	Rochester, N. Y	Mills, fanning	June 10, 1862.
34,518	Miles, O. E	Aurora, Ill	Vehicles, wheels, construction of	Feb. 25, 1862.
35,617	Miles, Purches	Hartford, Conn	Locks, sash	June 17, 1862.
36,229	Miles, Purches	New Haven, Conn	Meat-mincing machine	Aug. 19, 1862.
34,260	Miles, Thomas	Philadelphia, Pa	Knapsacks, slinging	Jan. 28, 1862.
36,962	Miles, William H., jr	Brooklyn, N. Y	Brush, paint	Nov. 18, 1862.
	Millar, J. C., and James McKenzie. (*See* McKenzie & Millar.)			
36,550	Millar, John C., assignor to self and Robert D. Cunningham	Troy, N. Y	Gig mills	Sept. 23, 1862.
	Millar, A. M., and W. O. Thomas. (*See* Thomas & Millar.)			
	Miller, Charles A. (*See* Hill, Albert M., assignor.)			
	Miller, Charles A. (*See* Kirkham, W. S., assignor.)			
34,440	Miller, David L	Madison, N. J	Elevating machine	Feb. 18, 1862.
	Miller, Edward. (*See* Marcy, John J., assignor.)			
	Miller, Edward. (*See* Fowler, Merwin, assignor.)			
35,461	Miller, Jacob	Canton, Ohio	Mills, fanning	June 3, 1862.
35,462	Miller, Jacob	Canton, Ohio	Mills, fanning	June 3, 1862.
35,463	Miller, Jacob	Canton, Ohio	Mills, fanning	June 3, 1862.
37,258	Miller, John Jacob, assignor to self and Ernst Prussing	Chicago, Ill	Condensing and evaporating, apparatus for	Dec. 23, 1862.
34,441	Miller, Joseph	Paris, Ohio	Rakes, horse	Feb. 18, 1862.
35,630	Miller, Lewis, and Jacob	Canton, Ohio	Harvesters	July 8, 1862.
37,049	Miller, Lewis, and Jacob	Canton, Ohio	Harvesting machines	Dec. 2, 1862.
34,640	Miller, Martin, jr	Vienna Austria	Electro-plating steel wire for piano-strings and other purposes, mode of.	Mar. 11, 1862.
1,285	Miller, S. H	Hanovertown, Ohio	Engines, steam, governors for (Reissue)	Mar. 4, 1862.
34,690	Millholland, J., and J. J. Lahaye	Reading, Pa	Journal boxes	Mar. 18, 1862.
35,575	Millholland, James	Reading, Pa	Injector, Gifford's	June 10, 1862.
35,984	Millholland, James	Reading, Pa	Ordnance, apparatus for casting	July 15, 1862.
	Milligan, S. G., *et al.* (*See* Armstrong, F. W., assignor.)			
35,985	Mills, George H., and Jackson M. Hanscom	Boston, Mass	Hammers	July 15, 1862.
36,665	Mills, James R	Bloomfield, Iowa	Pumps	Oct. 14, 1862.
34,585	Milne, Andrew D	Tiverton, R. I	Tobacco pipes	Mar. 4, 1862.
34,961	Minard, James T	Danbury, N. H	Wagons and sleighs, seats for	Jan. 28, 1862.
36,224	Minor, John A	Hartford, Conn	Fasteners, sash	Sept. 23, 1862.
	Mitchell, John S. (*See* Powers & Smith, assignors.)			
34,586	Mittelhaus, John	Berlin, Prussia	Teeth, artificial, setting	Mar. 4, 1862.
34,613	Mix, Eugene M., and James E., assignors to Wait T. Huntington and Harvey Platts.	Ithaca, N. Y	Clocks, calendar	Mar. 4, 1862.
1,651	Mix, G. J	Wallingford, Conn	Spoon shanks (Design)	Aug. 19, 1862.
	Mix, H. H., and L. W. Turner. (*See* Turner & Mix.)			
35,618	Mix, John	West Cheshire, Conn	Bits to braces, securing	June 17, 1862.
35,863	Moffatt, R. R., assignor to self and Hannah Hortley	La Crosse, Wis	Ordnance, breech-loading	July 8, 1862.
36,355	Moffitt, Alexander	Brownsville, Pa	Vehicles, hubs for	Sept. 2, 1862.
34,691	Mohler, Richard	Lancaster, Pa	Smut machines	Mar. 18, 1863.
36,230	Moller, William	New York, N. Y	Oven for reburning bone-black	Aug. 19, 1862.
36,356	Monnet, Prosper	Lyons, France	Colors, aniline, producing	Sept. 2, 1862.
36,357	Monnet, Prosper	Lyons, France	Colors, aniline, manufacture of	Sept. 2, 1862.
34,158	Monroe, Freedom	Romeo, Mich	Highways, machine for filling wagon-ruts on	Jan. 14, 1862.
	Monroe, James, and Issachar Frost. (*See* Frost & Monroe.)			
34,160	Monson, Charles	New Haven, Conn	Table, extension	Jan. 14, 1862.
34,312	Monson, Charles	New Haven, Conn	Desk, writing	Feb. 4, 1862.
34,313	Monson, Charles	New Haven, Conn	Ladder and staging for artisans	Feb. 4, 1862.
34,314	Monson, Charles	New Haven, Conn	Stair-case and ladder, folding	Feb. 4, 1862.
	Monson, Charles, and Stillman Moore. (*See* Kirk, Charles, assignor.)			
36,164	Monson, Charles	New Haven, Conn	Engine, rotary	Aug. 12, 1862.
34,666	Montgomery, Richard	New York, N. Y	Ordnance	Mar. 11, 1862.
34,727	Montgomery, Richard	New York, N. Y	Vessels, iron-clad	Mar. 18, 1862.
35,247	Montgomery, Richard	New York, N. Y	Sub-marine guns, apparatus for using	May 13, 1862.
35,495	Montgomery, Richard	New York, N. Y	Vessels, iron-clad, shield for	June 3, 1862.
35,496	Montgomery, Richard	New York, N. Y	Metal, apparatus for bending corrugated plates of	June 3, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
1,325	Montgomery, Richard	New York, N. Y.	Cars, iron (Reissue)	July 22, 1862.
36,656	Montignani, John O.	Albany, N. Y.	Clothes-wringing apparatus	Oct. 14, 1862.
36,791	Moody, Gleady	Falmouth, Me.	Hay, machines for spreading and turning	Oct. 28, 1862.
1,344	Moore, Henry, assignor to Richardson, Barnum & Co.	Salisbury, Conn.	Heating moulds, mode of (Reissue)	Sept. 16, 1862.
36,101	Moore, Charles C.	New York, N. Y.	Wind powers to produce a reciprocating movement, application of.	Aug. 5, 1862.
	Moore, D., and A. Phillippi. (*See* Phillippi & Moore.)			
34,067	Moore Daniel	Brooklyn, N. Y.	Fire-arms, revolving	Jan. 7, 1862.
34,766	Moore, Frederick H	Boston, Mass.	Garments, apparatus for cutting	Mar. 25, 1862.
35,831	Moore, J. C.	Peoria, Ill.	Planters, corn	July 8, 1862.
35,322	Moore, Jno. W., and W. H. Elliot	Plattsburg, N. Y.	Lanterns for marine telegraphs	May 20, 1862.
35,902	Moore, Joseph, assignor to the Vulcan Iron Works Co.	San Francisco, Cal.	Mills, ore-crushing	May 6, 1862.
	Moore, Lewis	Ypsilanti, Mich.	Planters, seed (Extension.)	April 17, 1862.
1,336	Moore, Lewis	Ypsilanti, Mich.	Planters, seed (Reissue.)	Aug. 26, 1862.
36,850	Moore, S. M.	Beloit, Wis.	Mowing machines	Nov. 4, 1862.
	Moore, Stillman, and Charles Monson. (*See* Kirk, Charles, assignor.)			
34,442	Morehouse, Charles R.	Cardington, Ohio	Traps, rat	Feb. 18, 1862.
	Morehouse, M. S., and M. D. Hartley. (*See* Hartley & Morehouse.)			
34,159	Morehouse, William	Buffalo, N. Y.	Augers, spoke-tenon	Jan. 14, 1862.
34,841	Morehouse, William	Buffalo, N. Y.	Lamps for burning coal-oil	April 1, 1862.
34,842	Morehouse, William	Buffalo, N. Y.	Lamps, mode of attaching chimneys to	April 1, 1862.
35,773	Morey, Amos B., and Wm. Scarlete	Aurora, Ill.	Feather, machine for dressing	July 1, 1862.
	Morgan, Chas. H. (*See* Wilson, Edward L., assignor.)			
35,032	Morgan, Geo. W., C. H. Tyler, and John McClave	Mount Vernon, Ohio.	Tents, hammock	April 22, 1862.
34,862	Morgan, John, Alfred Thomas Jay, Edmund Edwards, and Joseph Tilston.	London, England	Telegraphic cables	April 1, 1862.
37,264	Morgan, Nathan D	Mount Pleasant, N. Y.	Ticket, passenger	Dec. 23, 1862.
37,105	Morley, Oliver W	Ellsburg, N. Y.	Buckle	Dec. 9, 1862.
34,068	Morrell, James A	St. Charles, Mo.	Pumps	Jan. 7, 1862.
36,722	Morrell, Thomas J	Farmington, N. H.	Books, leaves of, from a continuous sheet of paper. Machine for making the.	Oct. 21, 1862.
35,619	Morrill, Charles	New York, N. Y.	Ordnance, breech-loading	June 17, 1862.
35,383	Morrill, Oscar F	Chelsea, Mass.	Liquid hydrocarbons, apparatus for vaporizing and burning.	May 27, 1862.
36,102	Morrill, Oscar F.	Chelsea, Mass.	Oils carbon, apparatus for gasifying and burning	Aug. 5, 1862.
	Morris, Ephraim	New York, N. Y.	Scoop and elevator	Nov. 25, 1862.
1,312	Morris, John C.	Cincinnati, Ohio	Wood-bending machines (Reissue.)	May 27, 1862.
	Morris, R. H., *et al.* (*See* Jones, Nathaniel, assignor.)			
35,895	Morrison, Enoch R.	New York, N. Y.	Walking figures, automatic apparatus for	July 15, 1862.
36,688	Morrison, H. B., assignor to C. H. Morrison	Mount Morris, N. Y.	Hose and pipes, nozzles for	Oct. 14, 1862.
34,587	Morrison, Robert	Newcastle-upon-Tyne, England	Iron, apparatus for forging and crushing	Mar. 4, 1862.
36,474	Morrison, Samuel G	Williamsport, Pa.	Casks, coal-oil, lining for	Sept. 16, 1862.
34,962	Morrison, William	Chadd's Ford, Pa.	Ploughs, iron and steel combined	Jan. 28, 1862.
34,213	Morse, Albert W	Easton, N. Y.	Mowing machines, track-cleaners in	Jan. 21, 1862.
34,641	Morse, Henry, and Dan Perry	Natick, Mass.	Water-elevators	Mar. 11, 1862.
	Morse, Jedediah, *et al.* (*See* Mansfield, Morse & Mansfield.)			
34,315	Mosher, Hugh W	Coeymans, N. Y.	Stove, cooking	Feb. 4, 1862.
36,571	Moses, Myron	Malone, N. Y.	Fire-arm, breech-loading	
35,350	Moss, James M., assignor to self and E. H. Williams	Waverly, Ia.	Saccharine juices, pans for evaporating	May 20, 1862.
35,484	Mosteller, Jonathan	Lockhaven, Pa.	Roofing and for other purposes, cement for	June 3, 1862.
34,843	Mott, Valentine	Rosiyn, N. Y.	Washing machine	April 1, 1862.
36,439	Mowbray, George M., assignor to self and Bradhurst Schieffelin.	Titusville, Pa.	Armor, defensive, naval	Sept. 9, 1862.
35,394	Mowris, James A	Neversink, N. Y.	Wagons	May 27, 1862.
	Mowris, Samuel. (*See* Sibley, Rufus, assignor.)			
36,103	Mozart, Don J	New York, N. Y.	Clock and watch movements	Aug. 5, 1862.
36,089	Muir, Geo. W., assignor to Jesse Albert Locke	Manchester, England	Ventilators for buildings	July 29, 1862.
	Muir, L. N. (*See* Stearns, L. L., assignor.)			
35,386	Muir, L. N., and A. J. Kline	Jersey Shore, Pa.	Washing machine	May 27, 1862.
36,695	Mullally, William	St. Paul, Minn.	Pumps	Oct. 28, 1862.
34,731	Muller, Julius J., assignor to Frederick Franck and John A. Tauber.	New York, N. Y.	Ore separator and washer	Mar. 18, 1862.
35,488	Munson, Alvan	Peterboro', N. H.	Pumps	June 3, 1862.
34,519	Munson, Jehiel, and Joshua R. Lyon	Burlington, Vt.	Diggers, potato	Feb. 25, 1862.
35,948	Murdock, William	Jersey City, N. J.	Casting, moulds for	May 13, 1862.
34,161	Murgatroyd, Francis	Cleveland, Ohio.	Engines, steam, oscillating	Jan. 14, 1862.
34,642	Muringer, F. S.	Philadelphia, Pa.	Food or beef tea, concentrated	Mar. 11, 1862.
36,667	Murphy, Thomas H.	New Orleans, La.	Hemp breaks	Oct. 14, 1862.
36,016	Murray, Charles A.	Pittsburg, Pa.	Piston packing	July 29, 1862.
34,328	Murray, Francis	Baltimore, Md.	Crushing ores, stamp-heads for	Aug. 26, 1862.
35,329	Murray, John B.	New York, N. Y.	Letters on street railroad cars, mode of collecting	May 20, 1862.
35,630	Mussey, Franklin	Bangor, Me.	Sawing shingles and other lumber, machines for	July 8, 1862.
35,690	Myers, A. P., Isaac Searles, and George W. Spencer	Prattsville, N. Y.	Churns	June 17, 1862.
37,288	Myers, D.	South Bend, Ind.	Car-brakes, railroad	Dec. 23, 1862.
35,774	Myers, John	Dallastown, Pa.	Windmills	July 1, 1862.
35,867	Myers, M. D.	Ilion, N. Y.	Elevator, hay	July 15, 1862.
	Myers, Uhl & Co. (*See* Martin, John M., assignor.)			
	Myzderse, Edward. (*See* Clapp, M. R., assignor.)			
	Myrick, Ira, and James C. Dow. (*See* Dow & Myrick.)			
35,396	Nash, Hiram	Lockport, N. Y.	Water-elevators	May 27, 1862.
	Nash, James O. and Eleanor D. (*See* Whitmarsh, Henry M., assignor.)			
	Nash, Josephus. (*See* Tobey, Enoch G., assignor.)			
	Nash, Z. B. B., and G. W. Cook. (*See* Cook & Nash.)			
34,643	Nason, Joseph, and Robert Briggs, assignors to Joseph Nason.	New York, N. Y.	Steam radiators	Mar. 11, 1862.
34,844	Naylor, Peter	New York, N. Y.	Balls, musket, machines for compressing	April 1, 1862.
34,994	Neal, Daniel B.	Mt. Gilead, Ohio	Saccharine juices, evaporating pans for	Mar. 11, 1862.
1,294	Neal, D. B., and H. C. Emery, assignors by several assignments to D. B. Neal and George B. House.	Mt. Gilead, Ohio	Saccharine juices, apparatus for evaporating (Reissue)	Mar. 25, 1862.
34,118	Neafus, Peter W	New York, N. Y.	Water-closets	Jan. 7, 1862.
34,162	Neer, Charles	Albany, N. Y.	Windows, &c., metallic blinds for	Jan. 14, 1862.
36,475	Neff, John	Prattsburg, N. Y.	Horse shoes, machine for making	Sept. 16, 1862.
34,039	Neill, Arthur	Boston, Mass.	Knife, fork, and spoon, combined	Jan. 7, 1862.
35,803	Nettleton, George, assignor to himself and A. F. Abbott	Woodbury, Conn.	Fasteners, rash	July 1, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35,833	Newman, Caesar	Boston, Mass	Mittens	July 8, 1862.
	Newman, R. B., and Samuel Etter. (*See* Etter & Newman.)			
37,005	Nevins, William	Irving, N. Y	Cultivators	Nov. 28, 1862.
	Newbould, John A. (*See* De Gumon & Barclay, assignors.)			
35,324	Newcomb, John H	Port Morris, N. J	Dredging machines	May 20, 1862.
34,486	Newcomb, Thos. and Chas. C., ass'rs to Thomas Newcomb	Kingston, Mass	Stump and rock extractor and elevator	Feb. 18, 1862.
36,723	Newell, Andrew F	Warren, Ohio	Fruit basket and crate	Oct. 21, 1862.
	Newell, Jas. S., and Edward Stern. (*See* Stern & Newell.)			
	New England Glass Company. (*See* Preston, Jno. A., ass'r.)			
36,017	Newhall, Cyrus	Hindsdale, N. H	Harvesters	July 29, 1862.
34,467	Newhouse, Henry, assignor to N. S. Bouton	Chicago, Ill	Mouldings, twist, machines for cutting	Feb. 18, 1862.
37,239	Newland, Thomas J	Utica, N. Y	Lamps, railway	Dec. 23, 1862.
	Newman, Martin, and Clark J. Hayes. (*See* Hayes & Newman.)			
36,851	Newnam, James	London, England	Saccharine juices, evaporator for	Nov. 4, 1862.
34,899	Newton, A. H	Worcester, Mass	Cruet or decanter	April 8, 1862.
34,374	Newton, Orrin	Pittsburg, Pa	Kettles, brass, dies for manufacturing	Feb. 11, 1862.
34,900	Newton, Orrin	Pittsburg, Pa	Lamp chimneys, holders for	April 8, 1862.
	New York Rubber Company. (*See* Lee & Alden, assignors.)			
	New York Rubber Company. (*See* Alden, Henry A., ass'r.)			
	New York Wire Railing Company. (*See* Bleecker, Theophylact B., assignor.)			
1,519	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet, &c. (Design)	Jan. 21, 1862.
1,520	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet, &c. (Design)	Jan. 21, 1862.
1,542	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Feb. 25, 1862.
1,543	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Feb. 25, 1862.
1,544	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Feb. 25, 1862.
1,545	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Feb. 25, 1862.
1,546	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Feb. 25, 1862.
1,550	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Mar. 18, 1862.
1,551	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Mar. 18, 1862.
1,552	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Mar. 18, 1862.
1,553	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Mar. 18, 1862.
1,554	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Mar. 18, 1862.
1,555	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Mar. 18, 1862.
1,556	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Mar. 18, 1862.
1,618	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 5, 1862.
1,619	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 5, 1862.
1,630	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,631	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,632	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,633	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,634	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,635	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,636	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,637	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,638	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,639	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,640	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,641	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,642	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,643	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,644	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,645	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,646	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,647	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,648	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,649	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,650	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Aug. 12, 1862.
1,666	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Nov. 11, 1862.
1,667	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Nov. 11, 1862.
1,668	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Nov. 11, 1862.
1,669	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Nov. 11, 1862.
1,670	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Nov. 11, 1862.
1,671	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Nov. 11, 1862.
1,672	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Nov. 11, 1862.
1,673	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Nov. 11, 1862.
1,698	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Dec. 16, 1862.
1,699	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Dec. 16, 1862.
1,700	Ney, Elemir J., ass'r to the Lowell Manufacturing Company	Lowell, Mass	Carpet pattern (Design)	Dec. 16, 1862.
36,165	Neynaber, A. F. W	Philadelphia, Pa	Paddles, pendulum	Aug. 12, 1862.
34,588	Nichols, Byron W	Fairhaven, Conn	Melodeons, coupling for octaves, &c., in	Mar. 4, 1862.
	Nichols, Daniel P. (*See* Thomas, Chauncey, assignor.)			
35,486	Nichols, G. W	Wheatland, Iowa	Pumps, rotary	June 3, 1862.
34,771	Nichols, J., and E. C. & D. Shepard	Battle Creek, Mich	Separators, grain	Jan. 7, 1862.
36,358	Nichols, James	Limestone, N. Y	Fire-arms, magazine	Sept. 2, 1862.
	Nichols, James B. (*See* Dillon, James, assignor.)			
	Nichols, James B., and Eben A. Sawyer. (*See* Sawyer & Nichols.)			
36,430	Nichols, T. V	Olena, Ill	Hedge-trimming device	Sept. 9, 1862.
	Nichols, William A., *et al.* (*See* Hall, David E., assignor.)			
35,034	Nichols, William T	Rutland, Vt	Ironing machine	April 22, 1862.
37,050	Nichols, William T	Rutland, Vt	Motive power	Dec. 2, 1862.
34,976	Nicholson, Henry C	Mt. Washington, Ohio	Jars, fruit, cover for	April 15, 1862.
	Nicholson, Henry C., and James F. Martin. (*See* Martin & Nicholson.)			
36,193	Nimbs, A. B., assignor to self and John C. Clifford	Buffalo, N. Y	Elevators, grain, floating	Aug. 12, 1862.
	Noble, George E. (*See* Phillips, Hervey S., assignor.)			
	Noble, John C., and Breeman Brady, jr. (*See* Brady & Noble.)			
	Noble, John C., and Thomas L. Birch. (*See* Birch & Noble.)			
35,108	Noble, S. H	Vernon Springs, Iowa	Sled and sleigh runners	April 29, 1862.
1,702	Nobles, John C	Rushford, N. Y	Cane-head, umbrella handle, or sword-hilt (Design)	Dec. 23, 1862.
34,767	Noe, Lewis F	New York, N. Y	Paddle-wheel	Mar. 25, 1862.
34,901	Norman, Robert B	Sacramento, Cal	Furnace for roasting ores	April 8, 1862.
35,738	North, John, assignor to William H., John A., Daniel S., and Samuel F. Appleton.	Middletown, Conn	Paper-folding machine	June 24, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	North, Townsend. (*See* Marble, Lansing, assignor.)			
	Northfield Knife Company. (*See* Mason, Samuel, assignor.)			
34,768	Northrup, Nelson W	Greene, N. Y	Stoves hot-air	Mar. 25, 1862.
34,769	Northrup, Nelson W	Greene, N. Y	Shafting and rods, coupling	Mar. 25, 1862.
	Northrup, Nelson W., and Mills L. Callender. (*See* Callender & Northrup.)			
	Northrup, Nelson W., and Mills L. Callender. (*See* Callender & Northrup.)			
35,537	Northrup, Nelson W	Greene, N. Y	Railroad, chairs and rails	June 10, 1862.
36,758	Northrup, Nelson W	Greene, N. Y	Car coupling	Oct. 21, 1862.
36,790	Northrup, Nelson W	Greene, N. Y	Car-wheels and car-axles combined	Oct. 28, 1862.
	Norton Furnace Company. (*See* Magee, John, assignor.)			
	Norton Furnace Company. (*See* Magee, John, assignor.)			
35,538	Norton, J. Henry	Boston, Mass	Gas-regulators	June 10, 1862.
36,668	Norton, Joel O	Wilton, Ill	Harvesters for broom-corn	Oct. 14, 1862.
34,443	Norton, John	Rosherville, England	Splitting stumps of trees, timber, &c., mode of	Feb. 16, 1862.
34,184	Norton, Marcus P., assignor to self and Chas. Eddy & Co.	Troy, N. Y	Stamp, hand, for post offices	Jan. 14, 1862.
35,539	Norton, Marcus P	Troy, N. Y	Envelope, post office, waybill	June 10, 1862.
37,175	Norton, Marcus P	Troy, N. Y	Stamp, post-mark and cancelling	Dec. 16, 1862.
1,296	Nowlan, Samuel, assignor to Charles Mettam	New York, N. Y	Galvanic soles (Reissue)	Mar. 11, 1862.
35,387	Nowlan, Samuel	New York, N. Y	Rice cleaning, hulling, and pearling machine	May 27, 1862.
36,852	Nye, John C	Cincinnati, Ohio	Fire-arms, breech-loading	Nov. 4, 1862.
35,635	Ober, Luke C	Boston, Mass	Lanterns	July 8, 1862.
1,261	O'Dorris, St. John	Philadelphia, Pa	Fertilizers (Reissue)	Jan. 28, 1862.
36,364	Oesterling, John	Wheeling, Va	Snap-dragon	Sept. 2, 1862.
34,320	O'Flanagan, Daniel	Charlestown, Mass	Fruit-strainer	Feb. 25, 1862.
	Ogden, James B. (*See* Hardie & Hayward, assignors.)			
	Ogden, William, and Gilbert Brooks. (*See* Brooks & Ogden.)			
35,035	O'Hara, Charles	London, Great Britain	Propeller	April 22, 1862.
36,018	Ohlemather, Charles	Aurora, Ill	Car trucks, springs to	July 29, 1862.
34,444	Old, James	Pittsburg, Pa	Pumps for deep wells	Feb. 16, 1862.
36,794	Olds, Alonzo W	Green Oak, Mich	Cultivators	Oct. 21, 1862.
35,467	Oliver, F. E	New York, N. Y	Pencil sleeve and eraser, combination of	June 3, 1862.
35,700	Oliver, H. W	New Haven, N. Y	Kilns for drying lumber	June 24, 1862.
35,775	Oliver, H. W	New Haven, N. Y	Gun stocks, machines for making	July 1, 1862.
34,468	Oot, Adam, assignor to self and M. S. Clark	Minetto, N. Y	Stoves, camp	Feb. 18, 1862.
	Opper, Adolph, *et al.* (*See* Fiebel, Marks, assignor.)			
35,776	Opper, Morris	New York, N. Y	Skirts, skeleton	July 1, 1862.
	Orcutt, Nelson, and George W. Gregory. (*See* Worthing, John P., assignor.)			
36,060	Orpen, Charles N., assignor to self and John Gaudee	New York, N. Y	Lamps, placing reservoirs for	July 29, 1862.
	Osborn, Lewis A. (*See* Bryant, James W., assignor.)			
35,949	Osborn, Lewis E	New Haven, Conn	Paper, machine for folding	May 13, 1862.
35,950	Osborn, William K	Chester, N. J	Straw carriers and grain separators	May 13, 1862.
	Osborne, D. M., and W. A. Kirby. (*See* Densmore, Byron, assignor. Reissue.)			
35,104	Osgood, Enoch	Boston, Mass	Steam, water, or gas, balance pressure regulator for	April 29, 1862.
36,380	Osgood, Jason C	Troy, N. Y	Excavators, submarine	Sept. 2, 1862.
36,104	Osmond, William	New York, N. Y	Screens, sand	Aug. 5, 1862.
35,777	Ostrander, James S	Albany, N. Y	Cup, drinking	July 1, 1862.
34,977	Ostrander, Wm., Isaac D. Reeder, and Joseph Cordman	Brooklyn, N. Y	Ordnance, construction of	April 15, 1862.
1,578	Otis, Frederick S., assignor to I. F. Tyson	Brooklyn, N. Y	Clock-case front (Design)	May 13, 1862.
1,579	Otis, Frederick S., assignor to I. F. Tyson	Brooklyn, N. Y	Clock-case front (Design)	May 13, 1862.
37,051	Otslot, J. D	Springfield, Ohio	Jacks, lifting	Dec. 2, 1862.
	Ott, John. (*See* Draeger, John, assignor.)			
36,883	Otterson, Thomas G	Millville, N. J	Jar, fruit	Nov. 4, 1862.
35,251	Oudry, Alphonse	Paris, France	Bridges	May 16, 1862.
34,316	Owen, George	Jacksonville, Ill	Ploughs, double coupling for	Feb. 4, 1862.
1,541	Owen George B	New York, N. Y	Clock-case (Design)	Feb. 18, 1862.
1,573	Owen, George B	New York, N. Y	Clock-case (Design)	May 6, 1862.
1,608	Owen, George B	New York, N. Y	Clock-case (Design)	June 17, 1862.
35,105	Owen, George B	New York, N. Y	Clock-case	Aug. 5, 1862.
1,634	Owen, George B	New York, N. Y	Clock-case (Design)	Oct. 21, 1862.
1,674	Owen, George B	New York, N. Y	Clock-case (Design)	Nov. 18, 1862.
	Owens, Lane, Dyer & Co. (*See* Dyer, Elbridge G., ass'r.)			
34,445	Packard, Caleb H	North Bridgewater, Mass	Clothes-wringer	Feb. 18, 1862.
	Packard, H. F., and T. K. Reed. (*See* Reed & Packard.)			
34,446	Paddock, Oscar	Watertown, N. Y	Stoves, operating dampers in	Feb. 18, 1862.
36,795	Paddock, Oscar	Watertown, N. Y	Ice-cream freezer	Oct. 21, 1862.
36,019	Padon, J. S	Summerfeld, Ill	Cultivators	July 29, 1862.
36,231	Paige, Abram	Springfield, Mass	Electrical instruments for medical purposes	Aug. 19, 1862.
36,987	Paine, Calvin H., assignor to self and Howard Tilden	Providence, R. I	Jacks, carriage	Sept. 30, 1862.
36,449	Paine, Henry M., assignor to Edward M. Archibald	Worcester, Mass	Steam-generators	Sept. 9, 1862.
35,834	Painter, William	Fallston, Md	Coin, counterfeit, detectors	July 8, 1862.
	Palmer, Aaron, and William H. Seymour. (*See* Seymour & Palmer. Design.)			
35,939	Palmer, Aaron	Brockport, N. Y	Sewing machines	May 13, 1862.
	Palmer, B. F., and Henry Warner. (*See* Warner & Palmer.)			
1,564	Palmer, Caleb W	Troy, N. Y	Stove, cook's (Design)	April 15, 1862.
37,092	Palmer, Charles H	Lakeville, Conn	Gun, repeating	Dec. 2, 1862.
35,026	Palmer, George	Littlestown, Pa	Mills, grinding, metallic	April 22, 1862.
35,888	Palmer, George	Littlestown, Pa	Pumps	July 15, 1862.
34,970	Palmer, Gilman M	Clinton, Mass	Car-wheels to axles, mode of attaching	Jan. 7, 1862.
35,108	Palmer, Henry H	Rockford, Ill	Pumps	April 29, 1862.
35,701	Palmer, John J., and A. Piamondon	Chicago, Ill	Separators, grain	June 24, 1862.
34,889	Palmer, L. C	East Winsted, Conn	Furnaces for heating scythes, &c	Mar. 4, 1862.
34,770	Palmer, Milton J	Homer, N. Y	Churn-dashers	Mar. 25, 1862.
36,572	Palmer, Nelson	Greenville, N. Y	Elevators, hay	Sept. 30, 1862.
36,963	Palmer, W. A	San Francisco, Cal	Amalgamators for gold and silver	Nov. 18, 1862.
	Palmer, Wm. E., and Jos. R. Gill. (*See* Gill & Palmer.)			
	Palmer, W. H., *et al.* (*See* Gill, Palmer & Webb.)			
34,317	Palmer, Wm. H., and W. Crumb	Orleans, N. Y	Pitch-forks, horse	Feb. 4, 1862.
34,321	Palmer, William J	Flushing, N. Y	Lamps	Feb. 25, 1862.
	Parker & Perkins. (*See* Perkins, Russell B., assignor.)			
34,080	Parker, Alfred G	North Gage, N. Y	Planters, corn	July 29, 1862.
	Parker, Charles. (*See* Savage, Elliot, assignor.)			

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35,778	Parker, Harrison, and Jonathan C. Sleeper	Boston, Mass	Veneers, machinery for cutting	July 1, 1862.
35,540	Parker, Jonathan	Biddeford, Me	Churns	June 10, 1862.
35,702	Parker, Leonard	Winterset, Iowa	Straw-cutters	June 24, 1862.
35,621	Parkhurst, Stephen R	New York, N. Y	Wool, cotton, &c., machinery for	June 17, 1862.
35,703	Parmelee, Spencer T	New Haven, Conn	Piano-fortes	June 24, 1862.
35,704	Parmelee, Spencer T	New Haven, Conn	Piano-fortes	June 24, 1862.
34,771	Parmenter, C. O	Amherst, Mass	Bonnets, machines for forming	Mar. 25, 1862.
36,021	Parmenter, I. W	New York, N. Y	Trunks	July 29, 1862.
36,476	Parrott, George W	Lynn, Mass	Boots and shoes, machines for nailing on the soles of	Sept. 16, 1862.
35,171	Parrott, Robert P	Cold Spring, N. Y	Ordnance, hooped	May 6, 1862.
34,699	Parrott, William P	Boston, Mass	Stone, &c., under water, method of laying	Mar. 18, 1862.
36,911	Parse, Stiles M	Newark, N. J	Band, elbow-joint	Nov. 11, 1862.
36,166	Parsons, Henry	Waterloo, N. Y	Looms, harness for	Aug. 12, 1862.
1,582	Patterson, James, assignor to Deborah, Albert E., and Nathaniel B. Powers.	Elizabeth, N. J	Floor-cloth pattern (Design)	May 20, 1862.
35,739	Patric, Lewis, assignor to himself and Henry Reed	Victor, N. Y	Separators, grain	June 24, 1862.
	Patrick, Charles L. (*See* Beach & Day, assignors.)			
36,912	Patterson, Jacob	Monroe, N. Y	Pumps, piston for	Nov. 11, 1862.
35,253	Paul, Almarin B	Silver City, Nev. Ter	Amalgamator and ore-mill	May 13, 1862.
	Paxson, William L. (*See* Hamer, James A., assignor.)			
36,022	Payne, David C	Elkhart, Ind	Grubbing machines	July 29, 1862.
37,106	Payne, Morgan	Cardington, Ohio	Churns	Dec. 9, 1862.
36,856	Payson, Sarah E	Peterboro', N. H	Baths, vapor	Nov. 4, 1862.
35,947	Peabody, H. O	Boston, Mass	Fire-arms, breech-loading	July 22, 1862.
34,978	Peabody, Roswell L	New York, N. Y	Watches	April 15, 1862.
36,573	Pearsall, G. T., and S. A. Garrison	Apalachin, N. Y	Boring hubs, machine for	Sept. 30, 1862.
36,477	Pease, James N	Harmony, N. Y	Horse-powers	Sept. 16, 1862.
34,231	Pease, J. A., assignor to Claudius A. Pease	New York, N. Y	Tobacco pipes	Jan. 21, 1862.
36,727	Pease, Julius A	New York, N. Y	Clothes-dryer	Oct. 21, 1862.
35,170	Peatt, A. A	Greenfield, Mass	Axles, shackle for connecting thills to	May 6, 1862.
35,699	Peavey, Washington R. and Hollis M	Swanville, Me	Press, hay	July 15, 1862.
35,254	Peberdy, Samuel	Philadelphia, Pa	Knitting-machine needles	May 13, 1862.
36,361	Peck, A. T	Scott, N. Y	Butter-tubs	Sept. 2, 1862.
	Peck, Lewis E. (*See* Hicks, Isaac, assignor.)			
37,176	Peck, Nelson	Jay, N. Y	Scrapers, earth	Dec. 16, 1862.
36,194	Peck, Royal H., assignor to himself, E. M. Gifford, and Orrill Whitney.	Walcott, Vt	Vegetable-cutters	Aug. 12, 1862.
	Peckham, John S. and Merritt. (*See* Cessford, George assignor.)			
36,362	Peebles, N. W	Brunswick, Ohio	Clothes-wringing machine	Sept. 2, 1862.
34,163	Peniston, A. M	Wellington, Mo	Seeding machines	Jan. 14, 1862.
35,836	Penn, Worden P., Jacob Geiss, and Jacob Brosius	Belleville, Ill	Harvesters	July 8, 1862.
	Penn, W. P., *et al.* (*See* Geiss, Brosius & Penn.)			
35,946	Pennington, John C	Paterson, N. J	Potash, nitrate of, from nitrate of soda, manufacture of	July 22, 1862.
36,525	Penniston, George W	North Vernon, Ind	Press, hay and hemp	Sept. 23, 1862.

	Perce, Elbert, and Andrew D. Campbell. (*See* Campbell & Perce.)			
	Percy & King. (*See* Hatfield, John, assignor.)			
35,109	Percy, John	Albany, N. Y	Cotton, machinery for ginning	April 29, 1862.
36,632	Perkins, A. H., assignor to himself and John M. May	Janesville, Wis	Process of treating coal tar to manufacture roofing cement	Oct. 7, 1862.
36,106	Perkins, John M	Cleveland, Ohio	Locks	Aug. 5, 1862.
34,863	Perkins, Russell B., assignor to Parker & Perkins	Meriden, Conn	Spoons, manufacture of	April 1, 1862.
	Perley, Charles. (*See* Harold, Thomas George, assignor.)			
1,345	Perley, Charles	New York, N. Y	Ships, compound capstans for (Reissue)	Oct. 7, 1862.
37,138	Perrin, Franklin, assignor to himself and David C. Perrin	Cambridge, Mass	Fabric, palm-leaf, manufacture of	Dec. 9, 1862.
	Perry, Daniel, and Henry Morse. (*See* Morse & Perry.)			
36,588	Perry, Eli, assignor to himself and John Boley	Baldwinsville, N. Y	Pumps, rotary	Sept. 30, 1862.
35,837	Perry, James	Brooklyn, N. Y	Dough underpressure, apparatus for measuring out and discharging	July 8, 1862.
1,278	Perry, John G	South Kingston, R. I	Meat-cutting apparatus (Reissue)	Feb. 25, 1862.
36,232	Perry, John G	South Kingston, R. I	Sausage-filler	Aug. 19, 1862.
36,233	Perry, John G	South Kingston, R. I	Sausage-filler	Aug. 19, 1862.
36,690	Perry, John G	South Kingston, R. I	Knives, pocket	Oct. 7, 1862.
37,053	Perry, John G	South Kingston, R. I	Meat-cutter	Dec. 2, 1862.
35,259	Perry, N. C	Chester, Conn	Wire, machines for bending	May 13, 1862.
35,569	Perry, Philander, ass'r to himself and Ephraim H. Bender	Waterford, N. Y	Blackboards, wipers for	Sept. 30, 1862.
35,062	Perry, Stuart, assignor to Charles H. A. Carter	Newport, N. Y	Horse-powers, tread	April 22, 1862.
35,063	Perry, Stuart, assignor to Charles H. A. Carter	Newport, N. Y	Horse-powers, circuit	April 22, 1862.
35,064	Perry, Stuart, assignor to Charles H. A. Carter	Newport, N. Y	Horse-powers, &c., speed-regulators for	April 22, 1862.
35,567	Perry, Stuart, assignor to Charles H. A. Carter	Newport, N. Y	Horse-powers	June 10, 1862.
36,327	Perry, Stuart, assignor to Charles H. A. Carter	Newport, N. Y	Horse-powers, circuit	Aug. 26, 1862.
34,979	Peters, Christian	Wadsworth, Ohio	Shells for ordnance	April 15, 1862.
36,964	Peters, John R	New York, N. Y	Air-engines	Nov. 18, 1862.
34,283	Peters, William, assignor to himself and Robert B. Porter	Baltimore, Md	Engines, steam and other, packing for	Jan. 28, 1862.
35,976	Peters, William, assignor to himself and Alfred Buck	Baltimore, Md	Axles, shafts, &c., coating the bearings of boxes for	July 22, 1862.
36,195	Peters, William, assignor to himself and Alfred Buck	Baltimore, Md	Brick, fire, manufacture of	Aug. 12, 1862.
36,329	Peters, William, assignor to himself and Alfred Buck	Baltimore, Md	Boilers, steam, covering	Aug. 26, 1862.
	Peterson & Stuart. (*See* Martino & Horton, ass'rs. Design.)			
34,864	Petrie, John, jr., assignor to John Cooke	Rochdale, England	Wool, &c., machines for drying	April 1, 1862.
	Pettee, C. L. (*See* Adams, L. J., assignor.)			
35,948	Pettengill, Asa, jr	Peterboro', N. H	Stave machines	July 22, 1862.
37,006	Pettengill, Dexter	Delhi, N. Y	Harness, slide for breast-straps for	Nov. 25, 1862.
36,669	Pettingill, John	Carroll, N. H	Digging potatoes, machines for	Oct. 14, 1862.
	Petty, Thomas K., and William G. Warden. (*See* Warden & Petty.)			
34,980	Pevey, Abiel	Lowell, Mass	Casting gas retorts	April 15, 1862.
35,256	Pfaff, John	Philadelphia, Pa	Violins, tail-pieces for	May 13, 1862.
36,363	Pfouts, David and John	Holmes county, Ohio	Martingale, pricking, for preventing horses or mules from throwing or breaking fences.	Sept. 2, 1862.
36,478	Phelps, Charles H	New York, N. Y	Can or tank for coal oils	Sept. 16, 1862.
37,241	Phelps, George M	Williamsburg, N. Y	Lock, combination	Dec. 23, 1862.
35,370	Phelps, John	Laporte, Ind	Washing machine	April 22, 1862.
36,855	Phelps William M	Marshal, Mich	Eaves troughs, connecting sheet-metal for	Nov. 4, 1862.
36,023	Philbrook, Josiah C	East Sanbornton, N. H	Flour, apparatus for filling sacks with	July 29, 1862.
34,119	Philipps, A., and D. Moore	Elizabethport, N. J	Railroad switches	Jan. 7, 1862.
1,574	Phillips, William G	Newport, Del	Chair, arm (Design)	May 6, 1862.
37,177	Phillips, Benjamin L	Providence, R. I	Pantographic engraving machine	Dec. 16, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35,740	Phillips, George B., assignor to John R. Crockett	Newark, N. J	Wrenches	June 24, 1862.
35,489	Phillips, Hervey S., assignor to himself and Geo. E. Noble.	Westfield, Mass	Fasteners, sash	June 3, 1862.
	Phillips, J. W., and Joseph H. Connelly. (*See* Connelly & Phillips.)			
1,632	Phineas, Myer	New York, N. Y	Inkstand (Design)	Aug. 19, 1862.
	Pick, Edward, and John Allen. (*See* Allen & Pick.)			
36,681	Pickering, Thomas R	New York, N. Y	Governor, centrifugal	Oct. 7, 1862.
	Pierce, A. H., and F. Hollen. (*See* Hollen & Pierce.)			
	Pierce, Carlos. (*See* Hawse, Benjamin B., assignor.)			
35,038	Pierce, Edward A	Brighton, Mass	Buckles	April 22, 1862.
34,089	Pierce, E. W., and W. J. Clark, assignors to W J. Clark & Co.	Southington, Conn	Cot, soldiers'	Jan. 7, 1862.
35,388	Pierce, Franklin B	Brockport, N. Y	Pumps, rotary	May 27, 1862.
35,110	Pierce, Hoel C	Homer, N. Y	Churns	April 29, 1862.
34,447	Pierce, William H	East Cambridge, Mass	Lanterns, guards for	Feb. 18, 1862.
	Pierce, William P. (*See* Vanstone, Samuel, assignor.)			
34,214	Piercy, James	Bloomfield, N. J	Paper pulp, washers for	Jan. 21, 1862.
37,178	Pierpont, William	Salem, N. J	Horse-powers	Dec. 16, 1862.
34,072	Pietsch, Herman	New York, N. Y	Amalgamator, gold and silver	Jan. 7, 1862.
36,084	Pimentel, J. A., and William H. Shute	New York, N. Y	Locks	July 29, 1862.
34,772	Pinkham, C. W	Fond du Lac, Wis	Fluid, burning	Mar. 25, 1862.
35,039	Pinkham, Susan D	Fond du Lac, Wis	Lamps	April 22, 1862.
	Piper, C. A., *et al.* (*See* Shaw, Estabrooks & Piper.)			
	Piper, Enoch, and George Collins. (*See* Collins & Piper.)			
36,107	Piper, Enoch	Camden, Me	Preserving animal and vegetable substances, apparatus for.	Aug. 5, 1862.
	Piper, John L. (*See* Linville, J. H., assignor.)			
	Piper, John W. (*See* Browne, Edward, assignor.)			
34,773	Pitkin, A. P	Hartford, Conn	Gas, illuminating, apparatus for the manufacture of	Mar. 25, 1862.
34,093	Pitt, William Jones	Middletown, Conn	Fire-arms, revolving	Jan. 7, 1862.
	Pitts, John B., and Jas. Brayley. (*See* Gordon, Alexander, assignor.)			
34,361	Place, William H., assignor to himself and George Harward	New York, N. Y	Blast-generator	Feb. 4, 1862.
	Plamondon, A., and John J. Palmer. (*See* Palmer & Plamondon.)			
36,965	Plant, Pascal, assignor to himself and Rufus Waples	Washington, D. C	Torpedoes under water, apparatus for discharging	Nov. 18, 1862.
35,622	Platt, Charles H	New York, N. Y	Blocks, tackle, bush for the sheaves of	June 17, 1862.
34,981	Platt, James	Utica, N. Y	Engines, rotary	April 15, 1862.
36,727	Platt, John, and William Richardson	Oldham, Great Britain	Wool, machine for cleaning	Oct. 21, 1862.
36,769	Platt, John, and William Richardson	Oldham, Great Britain	Gins, cotton	Oct. 28, 1862.
	Platts, Harvey, and Wait. T. Huntington. (*See* Mix, Eugene M. & James E., assignors.)			
34,590	Plimpton, James L	New York, N. Y	Skates, fastenings for	Mar. 4, 1862.
36,526	Plumb, Ovid	Millport, N. Y	Propeller, canal-boat	Sept. 23, 1862.
	Plummer, A., jr., and B. F. Skinner. (*See* Skinner & Plummer.)			

34,551	Pogue, Wilson T., assignor to Georges Hely	Vienna, Ind	Wagon wheels, while machinery is being run on the wagon, mode of holding.	Feb. 25, 1862.
35,468	Pohlman, Frederick	Coxsackie N. Y	Hay and straw cutters	June 3, 1862.
36,821	Poitevin, Alphonso L., assignor to Leopold Eidlitz	Paris, France	Photography to printing, application of	Oct. 28, 1862.
37,179	Pollard, Charles F	Lynn, Mass	Lasts, head block for	Dec. 16, 1862.
36,244	Pollock, David and John	Cleveland, Ohio	Teeth, artificial	Aug. 19, 1862.
34,902	Pomeroy, W. R	Millersburg, Ohio	Planters, corn	Ap'l 8, 1862.
36,108	Pomeroy, W. R	Millersburg, Ohio	Cartridges	Aug. 5, 1862.
35,623	Pond, Lucius W	Worcester, Mass	Fire-arms, revolving	June 17, 1862.
	Pond, Lucius W. (*See* Vickers, John H., assignor.)			
36,235	Pond, Martin W	Elyria, Ohio	Buckle, harness	Aug. 19, 1862.
34,120	Pond, Moses	Boston, Mass	Stoves	Jan. 7, 1862.
35,541	Pond, Moses	Boston, Mass	Heaters	June 10, 1862.
36,913	Ponten, Charles, and C. L. McAlpine	New York, N. Y	Foundations, sub-forming	Nov. 11, 1862.
35,705	Pool, Thomas	Brunswick, Ohio	Clothes-wringer	June 24, 1862.
	Pope, G. G., and E. F. Slocum. (*See* Boynton, G. R., ass'r.)			
	Popper, Leo, *et al.* (*See* Fishel, Marks, assignor.)			
36,792	Poppy, G. A., and C. H. Colgrove	Rochester, Ohio	Water elevators	Oct. 28, 1862.
34,774	Port, Henry	New York, N. Y	Casting pumps, metallic moulds for	Mar. 25, 1862.
36,257	Porter, Charles B	Ann Arbor, Mich	Chloroform, apparatus for inhaling	May 13, 1862.
	Porter, John H. and Robert. (*See* Webster, James, ass'r.)			
36,259	Porter, Robert	Philadelphia, Penn	Can, sheet metal, for oils, varnish, &c	Sept. 2, 1862.
	Porter, Robert B. (*See* Peters, William, assignor.)			
	Porter, W. D. (*See* Jones, J. L., assignor.)			
	Post, E. J. (*See* Cummins, Isaac, assignor.)			
36,085	Post, John H	Paterson, N. J	Sawing, boring, moulding, and planing machine	July 29, 1862.
35,914	Post, Sylvester O. and Eugene J	Chicago, Ill	Axles and reaches for vehicles	Nov. 11, 1862.
35,949	Potter, Elam O	New York, N. Y	Cartridges	July 22, 1862.
	Potter, Lewis, *et al.*			
36,327	Potter, N. Z	Uniontown, Ill	Sugar evaporator	Sept. 23, 1862.
35,690	Potter, S. T. W	Scott, N. Y	Plough, sub-soil	July 15, 1862.
35,568	Potts, George, assignor to self, Jos., Wm., A., and J. R. Potts.	Gocumtown, Penn	Washing machine	June 10, 1862.
36,822	Powe, Lewis, assignor to Park, McCurdy & Co	Pittsburg, Penn	Copper, sheet, manufacture of	Oct. 28, 1862.
	Powell, James H. (*See* Mackinney, Eugene C., assignor.)			
35,351	Power, John, and A. J. Bailey, ass'rs to Peter Holmes	Charlestown, Mass	Cork stoppers for bottles and other vessels, machine for cutting.	May 20, 1862.
36,966	Powers, D. J	Madison, Wis	Drill, grain	Nov. 18, 1862.
	Powers, Deborah, Albert E. and Nathaniel B (*See* Paterson, James, assignor.)			
34,186	Powers, John, and E. M. Smith, assignors to John S. Mitchell.	New York, N. Y	Harvesters	Jan. 14, 1862.
36,793	Powers, N. B	Lansingburg, N. Y	Composition for sizing for use in the manufacture of floor cloths, &c.	Oct. 28, 1862.
36,794	Powers, N. B	Lansingburg, N. Y	Composition for sizing and stiffening floor cloths, &c	Oct. 28, 1862.
37,054	Powers, Titus	Philadelphia, Penn	Rifling machine	Dec. 2, 1862.
34,469	Prall, William E., assignor to self, Henry Eastman, and Warren A. Witham.	Mainville, Ohio	Saccharine juices, evaporating pans for	Feb. 18, 1862.
	Prall, William E., and Lewis J. Whitcomb. (*See* Whitcomb & Prall.)			
	Pratt, Charles, *et al.* (*See* Drummond, James F., ass'r.)			
37,362	Pratt, Corydon	Pratt's Hollow, N. Y	Boot-crimping machine	Dec. 23, 1862
	Pratt, E. C. and J. H. (*See* Mason Josiah, assignor.)			

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35,126	Pratt, E. L., assignor to John B. Collin	Philadelphia, Penn	Sewing machine, thread tension of	Ap'l 29, 1862.
36,479	Pratt, Francis A	Hartford, Conn	Lathes, tool-rest for turning	Sept. 16, 1862.
35,624	Pratt, George	West Roxbury, Mass	Coal-sifters	June 17, 1862.
36,026	Pratt, H. T	Fitchburg, Mass	Chairs, seats and backs for	July 29, 1862.
	Pratt, Pascal P. (*See* Townsend, John F.)			
	Preble, John Q. (*See* Reay, George H., assignor.)			
36,967	Precht, Edward, and Victor Toepken	New York, N. Y	Matches, friction, manufacture and packing of	Nov. 18, 1862.
	Prentice, James H., *et al.* (*See* Hendrickson, Ezekiel M., assignor.)			
34,263	Prescott, Joseph B	Waterford, N. Y	Cannon, breech-loading	Jan. 28, 1862.
36,126	Preston, John A., assignor to the New England Glass Company.	Boston, Mass	Bottle stopper	Aug. 5, 1862.
36,795	Price, John, and William Lewis	Danville, Penn	Railroad rails, piles for	Oct. 28, 1862.
34,264	Price, Thomas J	Industry, Ill	Saccharine and other juices, construction of evaporating pans for.	Jan. 28, 1862.
	Prince, George A., and Thomas Stephenson. (*See* Louis La Fayette, assignor.)			
35,111	Prindle, Lyman B	Litchfield, Conn	Mills, flouring, cups for elevators for	Ap'l 29, 1862.
	Prussing, Ernst. (*See* Miller, John Jacob, assignor.)			
35,542	Pryibil, Paul	New York, N. Y	Sewing machines, tension regulator for	June 10, 1862.
36,548	Pryibil, Paul, assignor to self and George Scheiffele	New York, N. Y	Crystals, machine for cutting	Sept. 23, 1862.
36,365	Puckett, Caleb G	Cerro Gordo, Ind	Pumps drain valves for	Sept. 2, 1862.
34,591	Pulstenne, H. J. M	Paris, France	Ores, copper, mode of treating	Mar. 4, 1862.
35,706	Pulte, Mary Jane	Cincinnati, Ohio	Composition for cleaning gloves	June 24, 1862.
36,933	Putnam, Abel, jr	Chester, Vt	Garments, spring hooks for fastening	Nov. 11, 1862.
35,258	Putnam, Albert M	Antrim, N. H	Pumps	May 13, 1862.
34,592	Putnam, George W	Smithfield, N. Y	Purifying butter, device for	Mar. 4, 1862.
36,303	Putnam, Henry W	Cleveland, Ohio	Mangle	Aug. 26, 1862.
36,480	Putnam, H. W	Cleveland, Ohio	Clothes-wringer	Sept. 16, 1862.
36,528	Putnam, H. W	Cleveland, Ohio	Bottle fasteners, key and corkscrew for	Sept. 23, 1862.
36,728	Putnam, Henry W	Cleveland, Ohio	Clothes-wringing machine	Oct. 21, 1862.
	Putnam Machine Company. (*See* Burleigh, Charles, ass'r.)			
35,779	Putnam, Silas S	Dorchester, Mass	Curtain fixture	
36,366	Putnam, Silas S	Dorchester, Mass	Curtain fixture	
37,107	Putnam, Silas S	Dorchester, Mass	Horseshoes, machines for making nails for	Dec. 9, 1862.
	Putnam, Stephen, and Simeon Grover. (*See* Grover & Putnam.)			
	Quackenbush, J. D., and E. A. Jeffery. (*See* Jeffery & Quackenbush.)			
37,198	Quann, William, assignor to self, William N. Taylor, A. R. Wetmore, and Charles C. Lathrop.	Philadelphia, Penn	Ores of gold, silver, copper, &c., smelting	Dec. 16, 1862.
	Quimby, David S., and David S., jr. (*See* Going, Stephen R., assignor.)			
36,481	Quinn, Abraham	New York, N. Y	Distilling petroleum and other oils, apparatus for	Sept. 16, 1862.
35,891	Race, George	Norwich, N. Y	Water-elevators	July 15, 1862.
34,962	Race, John L	Port Washington, Wis	Shafting, mode of sustaining and protecting coupling of	April 15, 1862.
36,167	Rae, Martin	Manchester, England	Lamps	Aug. 12, 1862.
35,172	Rainbird, Samuel	Norwich, Great Britain	Vessels, &c., sunken, grappling, and raising	May 6, 1862.
35,259	Ralston, Andrew	West Middletown, Penn	Rack and trough for feeding stock, combined	May 13, 1862.
34,094	Ramsey, Robert	Wilmington, Penn	Bee-hives	Jan. 7, 1862.
35,469	Rand, D. C., and M. Wadhams	Perinton, N. Y	Drying grain and similar substances	June 3, 1862.
35,168	Rand, D. C., and M. Wadhams	Perinton, N. Y	Cask, water-tight	Aug. 12, 1862.
1,301	Randall, H. L., assignor to Israel D. Condit	Millburn, N. J	Hat bodies, machines for felting (Reissue)	April 15, 1862.
	Randall, Samuel. (*See* Mead, Matthias, assignor.)			
36,670	Randall, Wm. M., and George C. Howard	Belleville, Ohio	Type cases, bottom for	Oct. 14, 1862.
34,722	Randell, A., assignor to John J. Eckel	New York, N. Y	Oil, tallow, &c., mode of extracting	Mar. 18, 1862.
1,325	Randell, A., assignor to John J. Eckel	New York, N. Y	Press, oil (Reissue)	July 22, 1862.
35,173	Rankin, Charles E	New York, N. Y	Album case	May 6, 1862.
34,448	Rankin, James S	Madison, Ind	Desk, school	Feb. 18, 1862.
1,655	Ransom, Samuel H	Albany, N. Y	Stove, cook (Design)	Sept. 9, 1862.
	Ransom, S. H., & Co. (*See* Smith, Isaac, assig'r.) (Reissue.)			
	Ransom, S. H., & Co. (*See* Smith, Isaac, assignor.)			
	Ransom, Wm., and A. E. Teal. (*See* Teal & Ransom.)			
1,609	Rathbone, John F	Albany, N. Y	Stove, cook (Design)	June 17, 1862.
35,470	Rawson, Charles W	Little Prairie, Mich	Stump, extractor	June 3, 1862.
34,215	Ray, B. F	Baltimore, Md	Harvesters	Jan. 21, 1862.
34,265	Ray, D. Brainerd	Circleville, Ohio	Type-setting machine	Jan. 28, 1862.
34,983	Ray, George G	Boston, Mass	Pen-holders	April 15, 1862.
	Ray, Jas. M.. (*See* Redstone, John H., and Albert, E., ass'rs.)			
	Ray, James M. (*See* Redstone, John H., and Albert E., ass'rs.)			
37,243	Ray, Thomas H	North Adams, Mass	Umbrellas	Dec. 23, 1862.
	Ray, Thomas S., and Jonathan Mayhew. (*See* Cleveland, S. E., assignor.)			
36,190	Raymond, John C	Brooklyn, N. Y	Rudder	Aug. 5, 1862.
35,915	Raymond, Squire	Venice, N. Y	Pitchforks, horse	Nov. 11, 1862.
34,904	Raymond, Timothy	Franklinville, N. Y	Lamps	April 8, 1862.
	Read, C. D., and A. R. Burdick. (*See* Burdick & Read.)			
36,257	Read, Daniel, assignor to A. A. Taylor	Boston, Mass	Spinning rolls, covering	Aug. 19, 1862.
35,950	Read, Henry F	Brooklyn, N. Y	Wrenches, pipe	July 22, 1862.
34,645	Read, Resolved	Brockport, N. Y	Beans, machines for cleaning and assorting	Mar. 11, 1862.
37,199	Ray, George H., assignor to himself, George W. Bennett, assignors to John Q. Preble.	Hudson, N. J	Envelope machines, counting attachment for	Dec. 16, 1862.
36,367	Rebbeck, F. J., and E. M. Davies	Pittsburg, Penn	Lamp burners	Sept. 2, 1862.
36,854	Reckendorfer, Joseph	New York, N. Y	Pencils	Nov. 4, 1862.
35,471	Record, Homer B	Turner, Maine	Tree protectors	June 3, 1862.
	Reddick, James, and J. S. and T. B. Atterbury. (*See* Atterbury & Reddick.)			
	Reddick, James, and J. S., and T. B. Atterbury. (*See* Atterbury, Reddick, & Atterbury.)			
	Reddick, James, and J. S., and T. B. Atterbury. (*See* Atterbury, Reddick, & Atterbury.)			
	Reddick, James, and J. S., and T. B. Atterbury. (*See* Atterbury, Redlick & Atterbury.)			
35,325	Reddick, Henry	Chicago, Ill	Bottles, apparatus for corking	May 20, 1862.
35,131	Redstone, John H. and Albert E., assignors to themselves and James M. Ray.	Indianapolis, Ind	Motion, changing a rotary into a reciprocating	April 29, 1862.
35,174	Redstone, John H. and Albert E. Redstone	Indianapolis, Ind	Valves for steam-engines	May 6, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
36, 238	Redstone, John H. and Albert E., assignors to themselves and James M. Ray.	Indianapolis, Ind.	Harvesters	Aug. 19, 1862.
35, 892	Reece, B. H.	Marion, Iowa	Bee-hives	July 15, 1862.
36, 087	Reed, B. D.	Independence, Iowa	Whiffletrees, fastening for securing traces to	July 29, 1862.
35, 951	Reed, E. R. and N. F.	Hyde Park, Vt	Mop-head	July 22, 1862.
35, 389	Reed, George P.	Roxbury, Mass	Watch escapements	May 27, 1862.
	Reed, Henry. (*See* Patrie, Lewis, assignor.)			
	Reed, J. P. (*See* Fisler, Thomas, assignor.)			
36, 368	Reed, Moses	St. Louis, Mo.	Composition for cleaning painted woodwork, stone, &c.	Sep. 2, 1862.
35, 352	Reed, Osmond, assignor to himself and Allen D. Cheseboro	Paris, Mich	Hay rigging	May 20, 1862.
	Reed, Sam'l T., and Walt. S. Hill. (*See* Hill & Reed. Design.)			
35, 932	Reed, T. K., and H. F. Packard	East Bridgewater, Mass	Eyelet machines	July 22, 1862.
	Reeder, Isaac D., *et al.* (*See* Ostrander, Reeder & Corduan.			
35, 260	Rees, Ellas	Manassas Station, Va	Tongs, blacksmiths'	May 13, 1862.
35, 040	Reese, Adam R	Phillipsburg, N. J	Harvesters, cutting apparatus for	April 22, 1862.
35, 041	Reese, Adam R	Phillipsburg, N. J	Harvesters, finger-beams for	April 22, 1862.
34, 373	Reese, Jacob	Pittsburg, Penn	Tanks, oil	Feb. 11, 1862.
35, 818	Reese, Jacob	Pittsburg, Penn	Furnaces for coal-oil stills	July 8, 1862.
34, 845	Reeves, Alexander D	Portland, Maine	Supporter, female	April 1, 1862.
35, 582	Reeves, Samuel J	Philadelphia, Penn	Columns, shafts, braces, &c., construction of	June 17, 1862.
37, 108	Reeves, Samuel J	Philadelphia, Penn	Metal-wrought cannons, hydraulic pumps, &c., fagots for	Dec. 9, 1862.
	Regan, Antoine, *et al.* (*See* Gallaher, John, assignor.)			
34, 332	Reichman, Christian, assignor to Gustav Wedekind	Philadelphia, Penn	Lamp shades, clasps for	Feb. 4, 1862.
34, 523	Reichman, Joseph, and Heinreich Kriete	Chicago, Ill	Valve, governor	Feb. 25, 1862.
36, 574	Reichman, Charles H	New York, N. Y	Lamp shades, holders for	Sept. 30, 1862.
	Reichardt, Frederick, and J. W. Koehler. (*See* Koehler & Reichardt.)			
35, 933	Reichert, Henry	Shippensburg, Penn	Bolts, flour	July 22, 1862.
36, 169	Reid, James L	Van Wert, Ohio	Bee-hives	Aug. 12, 1862.
36, 693	Reilly, Terence F	New York, N. Y	Projectile, rotating for smooth-bored ordnance	Mar. 18, 1862.
1, 358	Renard, Joseph	Lyons, France	Aniline to produce a red coloring matter or dye, treating. (Reissue.)	Dec. 9, 1862.
1, 359	Renard, Joseph	Lyons, France	Aniline, red dye from (Reissue)	Dec. 9, 1862.
35, 175	Requa, E. B.	Jersey City, N. J	Lamp	May 6, 1862.
35, 893	Requa, E. B.	Jersey City, N. J	Lamp burners	July 15, 1862.
	Requa, J., and W. Billinghurst. (*See* Billinghurst & Requa.)			
	Reury, J. H., and Adam Eckerson. (*See* Eckerson & Reury.			
34, 524	Revere, John	Boston, Mass.	Casting metals, preparing metallic moulds for	Feb. 25, 1862.
	Reynolds, Charles T., *et al.* (*See* Drummond, James F., assignor.,			
37, 077	Reynolds, George H., assignor to himself and C. H. Delamater.	New York, N. Y.	Engines, steam, condensing	Dec. 2, 1862.
36, 529	Reynolds, Rensselaer	Stockport, N. Y	Looms	Sept. 23, 1862.

35, 961	Reynolds, Samuel G	Bristol, R. I	Spading machines, power	May 13, 1862.
35, 981	Reynolds, William	Manchester, N. H	Looms	July 22, 1862.
35, 622	Rhoades, Elias, sen.	Clyde, Ohio	Pumps	Oct. 7, 1862.
34, 646	Rhoads, N. A.	Waterbury, Vt	Clothes-wringer	Mar. 11, 1862.
1, 360	Rhoads, N. A.	Waterbury, Vt	Clothes-wringer (Reissue)	Dec. 9, 1862.
1, 361	Rhoads, N. A.	Waterbury, Vt	Clothes-wringer (Reissue)	Dec. 9, 1862.
	Rhoads, Wm. B. (*See* White, Nelson B., assignor.)			
37, 007	Rhoads, William B.	South Dedham, Mass.	Wringing machine	Nov. 25, 1862.
35, 909	Rhodes, John A.	Providence, R. I.	Warps, process of sizing, yarns for	May 13, 1862.
	Rice, Augustus, *et al.* (*See* Long, Charles B., assignors.)			
	Rice, Augustus, *et al.* (*See* Long, Charles B., assignors.)			
36, 369	Rice, Benjamin	Hastings, N. Y.	Axles, attaching thills to	Sept. 9, 1862.
	Rice, Charles L. (*See* Westlake, William, assignor.)			
	Rice, David. (*See* Trittin, Emil, assignor.)			
34, 926	Rice, T. C.	Cambridgeport, Mass.	Ordnance, breech-loading	Jan. 28, 1862.
35, 390	Richards, John	Columbus, Ohio	Saws, scroll, guide and support for	May 27, 1862.
35, 391	Richards, John	Columbus, Ohio	Saw stocks, scroll	May 27, 1862.
35, 392	Richards, John	Columbus, Ohio	Saw mills, scroll	May 27, 1862.
36, 729	Richards, John	Columbus, Ohio	Saw stocks, scroll, lubricators for	Oct. 21, 1862.
34, 593	Richards, T. C.	Milwaukie, Wis.	Curtain fixtures	Mar. 4, 1862.
	Richards, Walter D. (*See* Griffin, Caleb H., assignor.)			
35, 707	Richards, William H.	Newton, Mass.	Cushions, head, to prevent sun-stroke	June 24, 1862.
	Richardson, Barnum & Co. (*See* Mooers, Henry, assignor. Reissue.)			
36, 857	Richardson, George	Springfield, Mass	Valves, slide, balance	Nov. 4, 1862.
34, 614	Richardson, George W., (assignor to himself and George M. Wood.)	Grayville, Ill.	Harvesters	Mar. 4, 1862.
35, 543	Richardson, M. A.	Sherman, N. Y.	Butter, machine for working	June 10, 1862.
36, 530	Richardson, M. A.	Sherman, N. Y.	Cream pumps	Sept. 23, 1862.
35, 472	Richardson, Nathan	Gloucester, Mass.	Fish cutter, or bait mill	June 3, 1862.
	Richardson, Nathaniel P., & Co. (*See* Stevens, William W., assignor.)			
36, 916	Richardson, Nathaniel	Byberry, Pa.	Axles, coupling thills	Nov. 11, 1862.
35, 625	Richardson, Samuel	Rochester, N. Y.	Corn shellers	June 17, 1862.
36, 671	Richardson, S. H.	Cleveland, Ohio	Stump pullers	Oct. 14, 1862.
	Richardson, William, and John Platt. (*See* Platt & Richardson.)			
	Richardson, William, and John Platt. (*See* Platt & Richardson.)			
35, 894	Richmond, James	Lockport, N. Y.	Millstones, machines for dressing	July 15, 1862.
	Richter, Morris. (*See* Frohlick, W., assignor.)			
34, 775	Rieker, John W.	Boston, Mass.	Corn shellers	Mar. 25, 1862.
36, 482	Ricketson, Barton	New Bedford, Mass.	Ships and other navigable vessels, rigging, and in the spars of.	Sept. 16, 1862.
36, 483	Ricketson, Barton	New Bedford, Mass.	Ships and other navigable vessels, sails for	Sept. 16, 1862.
35, 176	Rider, A. K.	Hydeville, Vt.	Valve, cut-off	May 6, 1862.
	Rider, Emory. (*See* Buckland, William Henry, assignor.)			
35, 760	Rider, William	Almont, Mich.	Horse power	July 1, 1862.
34, 984	Ridge, Joseph	Richmond, Ind.	Lamps, coal-oil	April 15, 1862.
37, 144	Ridge, Joseph	Richmond, Ind.	Lamps, kerosene, or coal-oil	Dec. 9, 1862.
36, 730	Ridgway, John A	Boston, Mass.	Ordnance, operating	Oct. 21, 1862.
35, 393	Ridout, Moses T.	Milwaukie, Wis.	Butter mould	May 27, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
36,421	Ridout, Moses T.	Milwaukie, Wis.	Padlocks	Sept. 9, 1862.
	Ridout, M. T., and E. Valentine. (*See* Valentine & Ridout.)			
34,967	Riggs, Miles B.	New York, N. Y.	Harvesters, guard fingers for	Jan. 28, 1862.
36,796	Riggs, M. B.	New York, N. Y.	Harvesters, guard fingers for	Oct. 28, 1862.
37,008	Riley, John Matthews	Newark, N. J.	Caster, furniture	Nov. 25, 1862.
34,525	Riley, Reuben A.	Greenfield, Ind.	Cars, railroad, and locomotive, mode of preventing jarring and jolting of.	Feb. 25, 1862.
36,731	Riot, L. M. T.	Paris, France	Soap, manufacture of	Oct. 21, 1862.
	Ripley, Ezra, and N. S. Vedder. (*See* Vedder & Ripley. Design.)			
36,858	Rippon, William F.	Providence, R. I.	Projectile, explosive, for ordnance	Nov. 4, 1862.
37,055	Risdon, T. H.	Mount Holly, N. J.	Casting water-wheels	Dec. 2, 1862.
36,422	Ritchie, Edward S.	Brookline, Mass.	Compasses, mariners'	Sept. 9, 1862.
35,544	Ritner, Michael	Vincennes, Ind.	Projectiles of rifled ordnance, sabot for	June 10, 1862.
	Rittenhouse, J. P. (*See* Horn, Benjamin, assignor.)			
35,781	Ritter, Andrew J.	Rahway, N. J.	Desk, writing	July 1, 1862.
36,739	Rix, Alfred	San Francisco, Cal.	Latches, door	Oct. 21, 1862.
36,797	Roach, John B.	Elizabethport, N. J.	Valves, slide, of steam-engines	Oct. 28, 1862.
34,846	Robbins, C., and R. P. Burlingame	Chicago, Ill.	Corn-shellers	April 1, 1862.
34,647	Robbins, Elisha	Milford, Mass.	Looms, picker motion for	Mar. 11, 1862.
34,394	Robbins, Elisha	Milford, Mass.	Looms	May 27, 1862.
35,395	Robbins, Elisha	Milford, Mass.	Looms, picker staff for	May 27, 1862.
35,177	Robbins, E. T.	Cincinnati, Ohio	Ventilation	May 6, 1862.
35,178	Robbins, Henry E.	Hartford, Conn.	Tobacco boxes	May 6, 1862.
36,531	Roberts, B. S.	United States army	Fire-arms, breech-loading	Sept. 23, 1862.
36,859	Roberts, Cyrus	Three Rivers, Mich.	Cultivators	Nov. 4, 1862.
37,009	Roberts, Cyrus	Three Rivers, Mich.	Cultivators	Nov. 25, 1862.
37,010	Roberts, Cyrus	Three Rivers, Mich.	Cultivators	Nov. 25, 1862.
36,304	Roberts, Edward A. L.	New York, N. Y.	Steam gauge, thermometrical	Aug. 26, 1862.
35,626	Roberts, Ezekiel C.	Salem, Mich.	Preserving fruit and vegetables, mode of	June 17, 1862.
36,370	Roberts, L. D.	Cleveland, Ohio	Horseshoes, machines for making	Sept. 2, 1862.
34,847	Roberts, Sheridan	Cleveland, Ohio	Barrel-making machines	April 1, 1862.
1,620	Roberts, William W.	Hartford, Conn.	Burial case (Design)	Aug. 5, 1862.
1,621	Roberts, William W.	Hartford, Conn.	Burial case (Design)	Aug. 5, 1862.
35,839	Robertson, John R.	Syracuse, N. Y.	Vegetable cutters	July 8, 1862.
36,484	Robinson, A.	New York, N. Y.	Roofing, fabrics for	Sept. 16, 1862.
1,665	Robinson, C. A.	New York, N. Y.	Bottle (Design)	Oct. 21, 1862.
35,953	Robinson, Charles H.	Boston, Mass.	Lamps	July 22, 1862.
34,848	Robinson, Dyer	Reading Centre, N. Y.	Rakes, hay	April 1, 1862.
36,625	Robinson, Fayette S.	Boston, Mass.	Cotton, waste, machines for separating	Oct. 7, 1862.
37,056	Robinson, Gideon	New York, N. Y.	Straps, shoulder	Dec. 2, 1862.
36,660	Robinson, Isaac D.	Waterbury, Vt.	Clothes-wringing machine	Nov. 4, 1862.
37,109	Robinson, James	Barnegat, N. J.	Cable stopper	Dec. 9, 1862.
36,423	Robinson, John	New Wilmington, Pa.	Sacks, machine for holding open	Sept. 9, 1862.
36,572	Robinson, John	Hobart, N. Y.	Ploughs	Sept. 23, 1862.
37,244	Robinson, William	Belfontaine, Ohio	Churns	Dec. 23, 1862.
35,954	Robison, Horace	Cleveland, Ohio	Hats, apparatus for pressing and ironing	July 22, 1862.
36,533	Robison, Joseph	Potter Centre, N. Y.	Tires, machines for upsetting	Sept. 23, 1862.
37,110	Rockow, J. F.	New York, N. Y.	Hoisting apparatus	Dec. 9, 1862.
	Rockwell, J. V., and G. A. Stevens. (*See* Stevens & Rockwell.)			
	Rockwell, Lewis E., and Henry A. Burr. (*See* Burr & Rockwell.)			
	Rockwell, S. D., *et al.* (*See* Hebard, Hill & Rockwell.)			
	Rockwood, Aaron W. (*See* Stansell, Charles C., assignor.)			
	Rockwood, Aaron W. (*See* Stansell, Charles C., assignor.)			
34,776	Rodier, Louis C.	Springfield, Mass.	Fire-arm magazine	Mar. 25, 1862.
35,396	Roe, Henry A.	Madison, Ohio	Cheese vats, valves to heaters for	May 27, 1862.
	Rogers, A. H., and G. W. Thompson. (*See* Thompson & Rogers.)			
	Rogers, C. B., & Co. (*See* Joslin & Gibbs, assignors.)			
1,274	Rogers, David B.	Alleghany, Pa	Cultivator teeth (Reissue)	Feb. 11, 1862.
35,627	Rogers, H. C.	Scranton, Pa	Hoes	June 17, 1862.
36,861	Rogers, Henry S.	Willow Vale, N. Y.	Fire-arms, revolving	Nov. 4, 1862.
1,538	Rogers, John	New York, N. Y.	Statuette group, the Picket Guard (Design)	April 1, 1862.
1,539	Rogers, John	New York, N. Y.	Statuette group, Camp Life (Design)	April 1, 1862.
1,595	Rogers, John	New York, N. Y.	Statuary, the Checker Players (Design)	May 27, 1862.
1,596	Rogers, John	New York, N. Y.	Statuary, the Village Schoolmaster (Design)	May 27, 1862.
1,597	Rogers, John	New York, N. Y.	Statuary, the Camp Fire (Design)	May 27, 1862.
1,598	Rogers, John	New York, N. Y.	Statuary, the Town Pump (Design)	May 27, 1862.
34,596	Rogers, Thomas	Montgomery Square, Pa.	Measures, liquid	Feb. 25, 1862.
34,604	Rohmer, Joseph	Chicago, Ill.	Winnower, grain	Mar. 18, 1862.
34,868	Rollins, John P.	Cedar Rapids, Ia.	Shells for rifled ordnance	Jan. 28, 1862.
34,870	Romans, William	Columbus, Ohio	Cars, locomotive	Jan. 28, 1862.
34,884	Romerise, Henry T.	Philadelphia, Pa.	Car-coupling, automatic	Jan. 28, 1862.
	Root & Jewett. (*See* Stanard, Walter W., ass'or. Design.)			
	Root & Jewett. (*See* Stanard, Walter W., ass'or. Design.)			
	Root & Jewett. (*See* Stanard, Walter W., ass'or. Design.)			
	Root, E. B., *et al.* (*See* Custer, George, assignor.)			
34,375	Root, John B.	Battle Creek, Mich.	Engine, rotary	Feb. 11, 1862.
34,376	Root, John B.	Battle Creek, Mich.	Engine, rotary	Feb. 11, 1862.
	Root's Rotary Steam-engine Company. (*See* Clayton & Campbell, assignors.)			
34,333	Roper, S. H., assignor to Elmer Townsend	Boston, Mass.	Air-engines, hot	Feb. 4, 1862.
34,723	Roper, S. H., assignor to Elmer Townsend	Roxbury, Mass.	Air-engines, hot	Mar. 18, 1862.
34,245	Roscoe, James	Lancaster, Eng.	Engines, steam, lubricator for	Dec. 23, 1862.
35,628	Rose, Timothy	Cortlandville, N. Y.	Churns	June 17, 1862.
35,629	Rosenheimer, Simon	New York, N. Y.	Boots and shoes	June 17, 1862.
35,473	Ross, J. G., & H. W.	New York, N. Y.	Hydrants	June 3, 1862.
	Ross, Joseph	Ipswich, Mass.	Bridge, swinging (Extension)	Dec. 29, 1862.
	Ross, Thomas, *et al.* (*See* Howe, Strong & Ross)			
	Ross, Thomas, and Francis M. Strong. (*See* Strong & Ross.)			
36,708	Roth, Gregory, assignor to himself and Henry Homan	Cincinnati, Ohio	Candle-moulding machines	Oct. 28, 1862.
36,110	Roulliet, C. M.	Paris, France	Bands, driving, for machinery	Aug. 5, 1862.
34,777	Roulstone, Edward, A. G.	Roxbury, Mass.	Boxes, passing	Mar. 25, 1862.
34,924	Rouse, Philander, assignor to himself and W. S. Higgins	Macedon, N. Y.	Rig, topsail	April 8, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
36,733	Rowan, William, and J. M. H. Gill	Freeport, Pa	Screens, grain	Oct. 21, 1862.
36,170	Rowe, Anson	Atalissa, Ia	Millstone picks, handles for	Aug. 12, 1862.
37,111	Rowe, Anson	Atalissa, Ia	Separators, grain	Dec. 2, 1862.
	Rowe, J. H., and J. W. Merrill. (*See* Merrill & Rowe.)			
36,799	Rowe, Thomas	New York, N. Y	Crushing linseed, &c., machine for	Oct. 28, 1862.
36,375	Rowell, John S., and M. F. Lowth	Beaver Dam, Wis	Horse-powers	Sept. 30, 1862.
36,672	Rowell, John S., and M. F. Lowth	Beaver Dam, Wis	Seeding machines	Oct. 14, 1862.
35,910	Rowell, S. P., assignor to himself and A. Chipman	Melrose, Mass	Clothes-wringer	July 15, 1862.
36,694	Rowland, T. F	Green Point, N. Y	Metals, machines for planing	Oct. 7, 1862.
34,849	Royce, John S	Cuylersville, N. Y	Harvesters	April 1, 1862.
35,474	Roys, Thomas W	Southampton, N. Y	Harpoon, rocket	June 3, 1862.
35,475	Roys, Thomas W	Southampton, N. Y	Propellers	June 3, 1862.
35,476	Roys, Thomas W	Southampton, N. Y	Whales, sunken, to the surface of the water, apparatus for raising.	June 3, 1862.
35,977	Roys, Thomas W., and Gustavus A. Lilliendahl, assignors to G. A. Lilliendahl.	New York, N. Y	Rocket, war	July 22, 1862.
	Rue, John A., John S. Giles, and William Halliday. (*See* Giles, Halliday & Rue.)			
	Ruggles, Silas. (*See* Skinner, S. A., assignor.)			
36,673	Ruggles, Solomon W	Fitchburg, Mass	Stump-extractors	Oct. 14, 1862.
35,630	Rumbold, William	St. Louis, Mo	Domes	June 17, 1862.
35,895	Rumbold, William	St. Louis, Mo	Ships, construction of the defensive armor for	July 15, 1862.
37,059	Rupertus, Jacob	Philadelphia, Pa	Fire-arms, revolving	Dec. 2, 1862.
35,353	Rusch, Joseph, assignor to himself and Joseph Lux	New York, N. Y	Vessels, attaching armor-plates to	May 20, 1862.
34,695	Ruschhaupt, Frederick M	New York, N. Y	Malt liquors from becoming flat, apparatus for preventing.	Mar. 18, 1862.
35,477	Ruschhaupt, Frederick M., and John Schultz	New York, N. Y	Powder, percussion	June 3, 1862.
34,778	Rush, John	Philadelphia, Pa	Knapsack	Mar. 25, 1862.
	Russell and Erwin Manufacturing Company. (*See* Woodruff, Lucius, assignor.)			
34,216	Russell, Abraham T	New York, N. Y	Corkscrews	Jan. 21, 1862.
1,302	Russell, Clement	Massillon, Ohio	Horse-powers, double-geared (Reissue)	April 15, 1862.
34,594	Russell, E. P	Manlius, N. Y	Harvesters	Mar. 4, 1862.
1,681	Russell, N. E	New York, N. Y	Cutlery, table, handles of (Design)	Dec. 9, 1862.
37,200	Russell, Samuel R., assignor to himself and Benj. F. Tefft.	Middletown, Ohio	Shells, concussion fuze for	Dec. 16, 1862.
34,696	Russell, Titus H	Northfield, Vt	Water-wheels	Mar. 18, 1862.
35,896	Rust, George S	Chester, Ill	Apples, grapes, &c., expressing the juice of	July 15, 1862.
36,171	Rust, George S	Chester, Ill	Mills, &c., apple, convertible	Aug. 12, 1862.
35,545	Ruth, Henry	Summerfield, Ill	Planters, corn	June 10, 1862.
	Rutan, Henry	Cobourg, C. W	Buildings, method of ventilating & warming. (Extension)	June 9, 1862.
35,326	Ryan, William B	East Pembroke, N. Y	Diggers, potato	May 20, 1862.
36,800	Rynearson, John	Farmington, Ill	Harvesters	Oct. 28, 1862.
34,780	Sackett, Joel B	Lawton, Mich	Millstones, machines for dressing	Mar. 25, 1862.
37,246	Safford, Albert G	Boston, Mass	Cars, railroad, mode of operating brakes of	Dec. 23, 1862.
35,327	Sage, O	Wellington, Ohio	Cheese vats	May 20, 1862.

34,260	Sage, W. J	Steubenville Ohio	Cars, mode of propelling	Jan. 28, 1862.
34,527	Sager, Daniel	Albany, N. Y	Vehicles, wheel, self-acting brakes for	Feb. 25, 1862.
36,801	Sager, Daniel	Albany, N. Y	Wagon brakes, self-acting	Oct. 28, 1862.
35,398	Salisbury, Francis A	Greene, N. Y	Knife-cleaning box	May 20, 1862.
	Sampson & Tibbett's Scale Company. (*See* Sampson, Elnathan, assignor.)			
37,058	Sampson, Abiel	Providence, N. Y	Cranberries for preservation, putting up	Dec. 2, 1862.
	Sampson, Alden & Sons. (*See* Meyer, Victor, assignor design.)			
37,250	Sampson, Elnathan, assignor to the Sampson & Tibbett's Scale Company.	Waterford Junction, N. Y	Scales, platform	Dec. 23, 1862.
34,164	Sampson, Wm. S	New York, N. Y	Grain bins	Jan. 14, 1862.
37,139	Sampson, William S., assignor to self and G. H. Johnson	New York, N. Y	Grain bins	Dec. 9, 1862.
	Sampson, W. S. (*See* Johnson, George H., assignor, design.)			
34,905	Sanborn, Caleb	South Berwick, Me	Medicine for croup	April 8, 1862.
35,569	Sanborn, Jubal M., assignor to self and E. M. Gifford	Hardwick, Vt	Milk-cooler, portable	June 10, 1862.
34,697	Sanford, Gelston	New York, N. Y	Flax or hemp, machinery for breaking and dressing	Mar. 18, 1862.
34,698	Sanford, Gelston, and James E. Mallory	New York, N. Y	Flax or hemp, machinery for breaking and cleaning	Mar. 18, 1862.
34,779	Sanford, Gelston, and James E. Mallory	New York, N. Y	Flax and hemp, machinery for breaking	Mar. 25, 1862.
34,781	Sanford, Gelston, and James E. Mallory	New York, N. Y	Flax and hemp, machinery for scutching	Mar. 25, 1862.
35,112	Sanford, Gelston	New York, N. Y	Car seats, head-rests for	April 29, 1862.
36,703	Sanford, Gelston	New York, N. Y	Fibres from plants, machinery for separating	June 24, 1862.
35,709	Sanford, Gelston	New York, N. Y	Flax and hemp, machinery for dressing	June 24, 1862.
35,710	Sanford, Gelston, and James E. Mallory	New York, N. Y	Hemp and flax, machinery for breaking and cleaning	June 24, 1862.
36,485	Sanford, G., and J. E. Mallory	New York, N. Y	Flax and hemp, machinery for breaking and cleaning	Sept. 16, 1862.
36,674	Sanford, Gelston, and James E. Mallory	New York, N. Y	Flax and hemp, machinery for breaking and cleaning	Oct. 14, 1862.
36,675	Sanford, Gelston, James E. Mallory, and Clark P. Hayes	New York, N. Y	Flax, hemp, &c., machines for breaking	Oct. 14, 1862.
	Sanford, Harroun & Co. (*See* Hebard, Hill & Rockwell, assignors.)			
36,534	Sanford, N. C	Meriden, Conn	Augers	Sept. 23, 1862.
35,179	Sanford, Watson	Brooklyn, N. Y	Dampers	May 6, 1862.
35,180	Sanford, Watson	Brooklyn, N. Y	Furnaces, hot-air	May 6, 1862.
35,181	Sanford, Watson	Brooklyn, N. Y	Stove linings	May 6, 1862.
34,782	Sangster, James	Buffalo, N. Y	Lamps	Mar. 25, 1862.
36,802	Sangster, James, and Amos W	Buffalo, N. Y	Lamp-chimney fastenings	Oct. 28, 1862.
34,165	Sardy, John B	New York, N. Y	Ships of war, or other navigable vessels, construction of.	Jan. 14, 1862.
	Sargent, Charles G., and Seymour Bostwick. (*See* Bostwick & Sargent.)			
1,560	Sargent, J. B	New Britain, Conn	Hook, coat and hat (Design)	April 1, 1862.
1,571	Sargent, J. B	New Britain, Conn	Coffin handle (Design)	April 29, 1862.
34,334	Sargent, Joseph F., assignor to Elmer Townsend	Boston, Mass	Metal for shoe-tacks, machinery for rolling	Feb. 4, 1862.
34,335	Sargent, Joseph F., assignor to Elmer Townsend	Boston, Mass	Pegging boots and shoes, machines for	Feb. 4, 1862.
37,247	Saroni, Adolph S	New York, N. Y	Scarfs, neck, reversible	Dec. 23, 1862.
35,546	Sater, Jonathan L	Cincinnati, Ohio	Planting machine	June 10, 1862.
	Saterlee, G., *et al.* (*See* Hines, Saterlee & Hayden.)			
37,112	Sault, Thomas	Seymour, Conn	Gutta-percha, rubber, &c., machine for covering wire with	Dec. 9, 1862.
35,631	Saunders, A. F	Chelsea, Mass	Clothes-wringer	June 17, 1862.
36,803	Saunders, David	New York, N. Y	Metals, machines for cutting and planing	Oct. 28, 1862.
35,840	Saur, G. C. G	Washington, D. C	Dye, hair	July 8, 1862.
36,196	Savage, Elliot, assignor to Charles Parker	Meriden, Conn	Screws, wood, machines for threading	Aug. 12, 1862.
34,928	Sawyer, Andrew, and Henry Barnes	Burlington, Wis	Cultivators	Feb. 25, 1862.
34,699	Sawyer, Charles B	Fitchburg, Mass	Furnaces, hot-air	Mar. 18, 1862.
34,783	Sawyer, Charles B	Fitchburg, Mass	Hot-air registers	Mar. 25, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
37,011	Sawyer, Eben A., and James B. Nichols	Portland, Me	Sails, top, and courses of ships, apparatus for reefing	Nov. 25, 1862.
36,172	Sawyer, Sylvanus A. and A. M	Fitchburg, Mass	Shells, explosive, combined time and percussion fuze for	Aug. 12, 1862.
35,413	Sawyer, Wesley	Lowell, Mass	Fire-escapes	May 27, 1862.
	Scarlett, Wilbam. (*See* Cork, George, assignor)			
	Scarlett, William, and Amos B. Morey. (*See* Morey & Scarlett.)			
34,186	Schaffer, John, and Edward Spencer	St. Louis, Mo	Printing press	Jan. 14, 1862.
35,490	Schalkenbach, John Baptist, assignor to E. Justh	Triers, Russia	Piano orchestra	June 3, 1862.
35,065	Schatt, John, assignor to self and Samuel P. Mervine	Philadelphia, Pa	Gas metres, dry	April 22, 1862.
	Scheffele, George. (*See* Prejbil, Paul, assignor.)			
35,897	Schenkl, John P	Boston, Mass	Shells, time and percussion fuzes for	July 15, 1862.
36,236	Schenkl, John P	Boston, Mass	Shells, explosive, concussion fuzes for	Aug. 19, 1862.
36,576	Schenkl, John P	Boston, Mass	Shells, explosive, percussion fuzes for	Sept. 30, 1862.
	Schieffelin, Bradhurst. (*See* Mowbray, George W., assignor.)			
36,917	Schmidt, Augustus T	Pittsburg, Pa	Burning liquids lighter than water, apparatus for	Nov. 11, 1862.
35,841	Schneider, Christian G	Washington, D. C	Buckets, chamber	July 8, 1862.
34,167	Schneider, J. A	Cleveland, Ohio	Truss pads	Jan. 14, 1862.
35,936	Schneider, J. A	Cleveland, Ohio	Truss pads	July 22, 1862.
	Schnitzer, Joseph, and C. C. Harrison. (*See* Harrison & Schnitzer.)			
	Schnitzspan, Henry, and T. A. Havemeyer. (*See* Havemeyer & Schnitzspan.)			
34,271	Schoefield, John F	Lawrence, Mass	Shuttles	Jan. 28, 1862.
36,173	Schoonmaker, John L	Galnpville, N. Y	Washing machine	Aug. 12, 1862.
	Schramm, G. W., and R. Bocklen. (*See* Bocklen & Schramm.)			
36,237	Schreiber, John William	New York, N. Y	Lamps, mica, chimneys for	Aug. 19, 1862.
36,371	Schreiber, J. W	New York, N. Y	Lanterns, coal-oil	Sept. 2, 1862.
1,682	Schreiber, John W	New York, N. Y	Lamp chimney (Design)	Dec. 9, 1862.
	Schulte, John, and Frederick M. Ruschhaupt. (*See* Ruschhaupt & Schulte.)			
37,078	Schulze, Paul, assignor to self and Frederick W. Billing	Brooklyn, N. Y	Printing surfaces, process of obtaining	Dec. 2, 1862.
35,903	Schuyler, Isaac S., assignor to John J. Eckel	New York, N. Y	Press, baling	May 6, 1862.
	Schweitzer, Charles. (*See* Gregor, Charles, assignor.)			
36,309	Schweizer, Alois, and George Jansen	Cleveland, Ohio	Brush, scrubbing	Aug. 26, 1862.
36,061	Scofield, L. S., assignor to self and E. D. Bell	Somerville, Mass	Skirts, skeleton	July 29, 1862.
34,700	Scollay, George W	St. Louis, Mo	Burial cases	Mar. 18, 1862.
1,330	Scollay, George W	St. Louis, Mo	Burial cases (Reissue)	Aug. 19, 1862.
35,857	Scott, Edward R., assignor to self and W. L. Germon	Philadelphia, Pa	Photographs, vignette, apparatus for producing	July 8, 1862.
34,595	Scott, Edwin M	Auburn, N. Y	Turning and mortising hubs, machinery for	Mar. 4, 1862.
34,850	Scott, Edwin M	Auburn, N. Y	Notes, checks, &c., device for cancelling	April 1, 1862.
36,577	Scott, Francis B	Buffalo, N. Y	Pumps, rotary	Sept. 30, 1862.
36,174	Scott, J. Q. A	Pittsburg, Pa	Fire-arm, magazine	Aug. 12, 1862.
34,552	Scovill, Augustus J., and Augustus H. De Clerey	Bloomington, Ill	Engines, steam, pistons for	Feb. 25, 1862.
34,529	Scriptare, Eliphalet S	New York, N. Y	Oil cans	Feb. 25, 1862.

	Seaman, Aug. G. (*See* House, James A., and Henry A., assignors.)			
	Searles, Isaac, *et al.* (*See* Myers, Searles & Spencer.)			
34,784	Searls, A. G	Cleveland, Ohio	Churns	Mar. 25, 1862.
	Sears, Theodore C., *et al.* (*See* Hall, David E., assignor.)			
35,654	Seavey, John E., assignor to self and Matthew E. Boehner	Kennebunkport, Me	Sail, line to mast hoop	June 17, 1862.
35,789	Sebo, John	Wilmington, Del	Bedsteads, hospital	July 1, 1862.
38,578	Sebo, John	Wilmington, Del	Bedsteads, invalid	Sept. 30, 1862.
35,858	Sedgebeer, Joseph, assignor to self and James L. Haven	Cincinnati, Ohio	Millstone, dress	July 8, 1862.
35,783	Sealy, R. D	Brookline, Mass	Fire-arms, cap-priming attachment to	July 1, 1862.
36,175	Sealy, Samuel J	Brooklyn, N. Y	Casks, sheet-metal	Aug. 12, 1862.
36,484	Sealy, Samuel J	Brooklyn, N. Y	Plates, corrugated, manufacture of	Sept. 9, 1862.
37,248	Sealy, Samuel J	Brooklyn, N. Y	Houses, metallic	Dec. 23, 1862.
37,285	Sealy, Samuel J	Brooklyn, N. Y	Canal locks	Dec. 23, 1862.
35,711	Sealy, Samuel M., and Peter Hopkins	Peoria, Ill	Engine, steam, piston for	June 24, 1862.
36,486	Selleck, Thaddeus	Greenwich, Conn	Engines, locomotive, traction for	Sept. 16, 1862.
35,127	Sellers, Coleman, assignor to William Sellers & Co	Philadelphia, Pa	Press, wheel	April 29, 1862.
36,028	Sellers, Coleman	Philadelphia, Pa	Photographic pictures, machine for rolling	July 29, 1862.
34,217	Sellers, William	Philadelphia, Pa	Motion, transmitting and arresting	Jan. 21, 1862.
36,111	Sellers, William	Philadelphia, Pa	Lathes, tool-holders for turning	Aug. 5, 1862.
36,112	Sellers, William	Philadelphia, Pa	Metal, boring mills for	Aug. 5, 1862.
36,113	Sellers, William	Philadelphia, Pa	Metal planing machines	Aug. 5, 1862.
37,180	Sellers, William	Philadelphia, Pa	Belt-shifting device	Dec. 16, 1862.
37,201	Sellier, Louis Jules, deceased, by Eugene Lemercier, administrator, assignor to Amasa Bemis How.	Paris, France	Boots and shoes, machine for sewing on the soles and heels of.	Dec. 16, 1862.
	Semple, W. F., and H. Cassel. (*See* Cassel & Semple.)			
34,985	Sergeant, Henry C	Cincinnati, Ohio	Gas regulators	April 15, 1862.
36,643	Sergeant, Henry C	New York, N. Y	Pumps, steam	Oct. 7, 1862.
	Serrell, Alfred T	New York, N. Y	Moulding, machinery for making (Extension)	April 28, 1862.
36,918	Severance, L. M	Dixon, Ill	Scales, platform	Nov. 11, 1862.
36,662	Sewell, William	New York, N. Y	Pumps, steam	Nov. 4, 1862.
36,663	Sewell, William	New York, N. Y	Pumps, steam, valves for	Nov. 4, 1862.
35,638	Sexton, Samuel B	Baltimore, Md	Heaters	June 17, 1862.
35,984	Seybold, William	McKees's Port, Pa	Lamps, miners'	May 13, 1862.
36,372	Seymour, Charles	Laporte, Ind	Tires, machines for upsetting and stretching	Sept. 2, 1862.
36,176	Seymour, Edward L., assignor to Louis F. Therasson and Hiram Ketchum, jr.	New York, N. Y	Grain, mode of sifting and bagging	Aug. 12, 1862.
34,555	Seymour, Elias W., assignor to self and Geo. W. Gregory	Centre Lisle, N. Y	Wagons, shifting hinge joint, or coupling shafts of	Feb. 25, 1862.
35,904	Seymour, Elias W	Lisle, N. Y	Carriages, method of constructing	May 6, 1862.
36,305	Seymour, Harry	Dartmoor, G. B	Fuel, artificial	Aug. 26, 1862.
1,660	Seymour, H. I	Troy, N. Y	Chair (Design)	Sept. 23, 1862.
35,354	Seymour, James M., assignor to Edward H. Ashcroft	Boston, Mass	Fire-arms, breech-loading, gas check for	May 20, 1862.
36,633	Seymour, Pierpont	East Bloomfield, N. Y	Seeding machines	June 17, 1862.
34,765	Seymour, William H	West Hartford, Conn	Heaters	Mar. 25, 1862.
34,986	Seymour, William H., and Aaron Palmer	Rockport, N. Y	Harvesters, rakes for	April 15, 1862.
35,182	Shaefer, John	Lancaster, Pa	Bedstead rails, attachment for	May 6, 1862.
36,437	Shaefer, John	Lancaster, Pa	Panels, iron, to wooden frames, constructing and attaching.	Sept. 9, 1862.
	Shaefer, John B., and John L. Livingston. (*See* Boyers, William, assignor.)			
36,127	Shaler, Ira W., and Reuben, assignors to Ira W. Shaler	Brooklyn, N. Y	Bullet, compound, for small arms	Aug. 12, 1862.
36,968	Shaler, Reuben	Madison, Conn	Gun, (spring) centrifugal	Nov. 18, 1862.
36,919	Shalling, F. G	Somerset, Mass	Locks	Nov. 11, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
34,615	Shannon, Alexander, assignor to self, T. W. Weathered, and E. B. Cherevoy.	New York, N. Y	Cartridges for fire-arms	Mar. 4, 1862.
36,535	Shannon, Jackson	Freeport, Ill	Seeding machines	Sept. 23, 1862.
1,613	Sharkey, James	Brooklyn, N. Y	Gateway and fence for burial plats (Design)	July 29, 1862.
34,987	Sharpe, Christian	Philadelphia, Pa	Cartridge, metallic	April 15, 1862.
	Sharpe, Christian	Philadelphia, Pa	Gun-sliding breech-pin, and self-capping (Extension)	Aug. 30, 1862.
37,097	Sharpe, Christian	Philadelphia, Pa	Rifling machines	Dec. 2, 1862.
	Shaver, Jacob, *et al.* (*See* Groom, Smith, assignor.)			
	Shaver, Jacob. (*See* Groom, Smith, assignor.)			
37,209	Shaw, A. B., assignor to self and N. H. Shaw	Worcester, Mass	Sewing machines	Dec. 16, 1862.
35,842	Shaw, Jehyleman	Bridgeport, Conn	Silver from waste solutions, apparatus for saving	July 8, 1862.
34,530	Shaw, Melvin	Abington, Mass	Leather, composition for dressing	Feb. 25, 1862.
34,701	Shaw, Noah, William B. Estabrooks and C. A. Piper	Eau Claire, Wis	Shingle machine	Mar. 18, 1862.
34,664	Shaw, Philander, assignor to Charles E. Hodges and N. D. Silsbee.	Boston, Mass	Writing tablets	Mar. 11, 1862.
35,042	Shaw, Thomas	Philadelphia, Pa	Tobacco pipes	April 22, 1862.
35,128	Shaw, Thomas, assignor to self and Philip S. Justice	Philadelphia, Pa	Telegraphic cables, mode of laying	April 29, 1862.
35,279	Shaw, Thomas, assignor to self and P. S. Justice	Philadelphia, Pa	Batteries, marine, or other means of connecting metallic armor, plates for	May 13, 1862.
36,238	Shaw, Thomas	Philadelphia, Pa	Pumps, blow-off cocks for	Aug. 19, 1862.
1,319	Shaw, William H., assignor, through mesne assignments, to Levi L. Tower.	Cambridge, Mass	Pencils, lead and rubber, head for (Reissue)	June 24, 1862.
35,397	Shawver, M. and S	Bellefontaine, Ohio	Harvesters	May 27, 1862.
35,396	Shearer, D. H., and Cyrus Haynes	West Grove, Iowa	Washing machines	May 27, 1862.
36,239	Shedd, William B	East Boston, Mass	Brush, hat	Aug. 19, 1862.
35,784	Sheiden, Moses	Calais, Vt	Harrows	July 1, 1862.
	Shelton & Osborn, Skirt Co., *et al.* (*See* De Forest, Thomas B., assignor.)			
1,523	Shepard, Charles J	New York, N. Y	Stove (Design)	Mar. 4, 1862.
	Shepard, D., and J. and E. C. Nichols. (*See* Nichols & Shepard.)			
35,808	Shepard, J. R. and J. A	Waukegan, Ill	Clothes-dryer, window	July 15, 1862.
	Shepard, M. W., *et al.* (*See* Jenkins, Jacob, assignor.)			
34,851	Shepard, Robert	Shaker Village, N. H	Leveller, land	April 1, 1862.
36,029	Shepard, Silas	Taunton, Mass	Looms	July 29, 1862.
35,066	Sheridan, James	St. Louis, Mo	Ploughs, snow	April 22, 1862.
34,648	Sherman, H. C	Buffalo, N. Y	Stills, coudensers for	Mar. 11, 1862.
34,531	Sherman, S. J	Brooklyn, N. Y	Dresses, ladies', springs for	Feb. 25, 1862.
	Sherwood & Douglas. (*See* Douglas, Alexander, assignor.)			
36,962	Sherwood, Daniel, assignor to self and Edward P. Woods	Lowell, Mass	Strainer, wire-gauze	Nov. 18, 1862.
37,113	Sherwood, George and Henry M	Chicago, Ill	Ink-wells, fastening the cover of	Dec. 9, 1862.
35,113	Sherwood, Isaac	Unadilla, N. Y	Water elevators	April 29, 1862.
36,804	Sherwood, O., jr	Independence, Iowa	Mills, grinding	Oct. 28, 1862.
	Sherwood, S. S., and Alexander Douglas. (*See* Douglas & Sherwood.)			
	Shimer, Sylvanus, and Ferdinand Garber. (*See* Garber & Shimer.)			
	Shinn, J., and T. C. Andrews. (*See* Andrews & Shinn.)			
35,547	Shipherd, W. C	Saratoga Springs, N. Y	Boot-crimping device	June 10, 1862.
37,114	Shipherd, W. C	Saratoga Springs, N. Y	Lasts	Dec. 9, 1862.
36,426	Shireman, Joseph H	East Berlin, Pa	Rakes, horse	Sept. 9, 1862.
34,539	Shirley, D. H	Boston, Mass	Railroad switch	Feb. 25, 1862.
36,030	Shive, David	Philadelphia, Pa	Egg-beater	July 29, 1862.
	Shively, J., and C. H. McAleer. (*See* McAleer & Shively.)			
36,031	Sholl, Christian	Mt. Joy, Pa	Fastener, sash	July 29, 1862.
36,373	Shore, Edward	Conshohocken, Pa	Knitting machines	Sept. 2, 1862.
34,378	Short, Joseph, assignor to Charles Short	Boston, Mass	Knapsacks	Jan. 28, 1862.
35,032	Short, Joseph, assignor to Charles Short	Salem, Mass	Sling for carrying blankets and overcoats	April 15, 1862.
37,203	Short, Joseph, assignor to Abbie H. Short	Boston, Mass	Knapsacks	Dec. 16, 1862.
35,235	Shuler, J. D. and J. T	Lockport, N. Y	Baskets, means for manufacturing	May 13, 1862.
36,030	Shute, Aaron	Flushing, N. Y	Fire-escapes	July 29, 1862.
	Shute, William H., and J. A. Pimentel. (*See* Pimentel & Shute.)			
35,570	Sibley, Rufus, assignor to Samuel Mowry	Greenville, Conn	Photographs, press for	June 10, 1862.
1,280	Sickels, Frederick E	New York, N. Y	Engines, steam (Reissue)	Jan. 21, 1862.
1,283	Sickles, Frederick E	New York, N. Y	Valves of steam-engines, method of opening and closing. (Reissue.)	Jan. 28, 1862.
35,389	Sickles, Gerard	Roxbury, Mass	Boots and shoes, metal plates for protecting the soles of	May 20, 1862.
	Sigesmond, S. B., and Theodore Brecht. (*See* Brecht & Sigesmond.)			
	Silsbee, N. D., and Charles E. Hodges. (*See* Shaw, Philander, assignor.)			
	Silsby, Horace C. (*See* Williams, Dyer, assignor.)			
1,339	Silverthorn, Newman, assignor to James M. Allen	Prescott, Mo	Boot and shoe tip (Reissue)	Sept. 2, 1862.
34,273	Silvester, Albert H	Boston, Mass	Bootees, manufacture of	Jan. 28, 1862.
35,330	Silvester, Nelson	Granger, Ohio	Planters, corn, foot	May 30, 1862.
35,063	Simonds, Jehial H	New York, N. Y	Heaters	April 22, 1862.
35,374	Simpson, A. J., and J. B. Currier	Lowell, Mass	Lamp-burners	Sept. 2, 1862.
35,676	Simpson, John, and Wm. Hayden	Tecumseh, Mich	Grain-cleaners	Oct. 14, 1862.
37,090	Simpson, John M	Maultville, N. Y	Tenons on wheel spokes, machine for cutting	Dec. 2, 1862.
36,033	Simrell, Wm. W	Great Bend, Pa	Cars, railroad, axle boxes for	July 29, 1862.
36,940	Simrell, Wm. W	Great Bend, Pa	Auger handles	Aug. 19, 1862.
36,941	Sinclair, James P	Little Prairie, Mich	Car coupling	Aug. 19, 1862.
36,980	Sinclair, Jesse	Davenport, Iowa	Shooting stock, animal	Nov. 11, 1862.
34,906	Singer, I. M	New York, N. Y	Sewing machines	April 11, 1862.
	Sisler, Edmund. (*See* March, Henry C., assignor.)			
35,809	Skidmore, Darius	Seneca Falls, N. Y	Door-knobs to their spindles, mode of fastening	July 15, 1862.
34,786	Skiff, Stephen B	New Bedford, Mass	Horseshoes, vice for holding and swaging	Mar. 25, 1862.
34,449	Skinner, B. F., and A. Plummer, jr	Mystic Bridge, Conn	Fire-arms, breech-loading	Feb. 18, 1862.
34,073	Skinner, George B	Damascus, Pa	Water-wheel	Jan. 7, 1862.
36,441	Skinner, S. A., assignor to self and Silas Ruggles	Bristol, Vt	Bedstead, lounge and chair	Sept. 9, 1862.
34,218	Slack, Charles A	Frenchtown, N. J	Wagon and carriage brakes	Jan. 21, 1862.
36,991	Slaughter, Henry B	Cumpton, Md	Preserving fruits, &c., in sealed cans	Nov. 11, 1862.
	Sleeper, Jonathan C., and Harrison Parker. (*See* Parker & Sleeper.)			
36,823	Slingerland, John, assignor to self and John H. Kelly	Green Point, N. Y	Stop, window	Oct. 28, 1862.
34,702	Sloan, John	Philadelphia, Pa	Boots and shoes, in-sole for	Mar. 18, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
36,677	Sloan, William D	New York, N. Y	Skirts, hooped	Oct. 14, 1862.
35,479	Slocomb, Samuel	Cambridge, Mass	Inkstands	June 3, 1862.
	Slocum, E. F., and G. G. Pope. (*See* Boynton, G. R., assignor.)			
34,787	Slocum, Joseph	Syracuse, N. Y	Diggers, potato	Mar. 25, 1862.
	Sloper, Bevan G., and John McCall. (*See* McCall & Sloper.)			
34,598	Small, Charles W	Bangor, Me	Projectiles for rifled ordnance	Mar. 4, 1862.
34,169	Small, H. C	East Stonington, Me	Writing-case and checker-board combined	Jan. 14, 1862.
35,399	Smead, Horace A., and Charles H. Huntley	Pavilion, N. Y	Car couplings	May 27, 1862.
36,805	Smedley, John D	Chicago, Ill	Grate for burning petroleum and other liquid fuel	Oct. 28, 1862.
	Smith, Aaron, deceased, by Paulena Smith, Mortimer Smith, and Jane Smith, by her guardian, Ira Jones, heirs-at-law.	Bloomfield, Mich	Separators, grain (Extension)	April 7, 1862.
36,309	Smith, Aaron	Brooklyn, E. D., N. Y	Gas regulator	Aug. 26, 1862.
36,894	Smith, Aaron W	Manchester, N. H	Spinning, fliers for	Nov. 4, 1862.
34,318	Smith, Addison	New York, N. Y	Blowers, rotary	Feb. 4, 1862.
	Smith, Addison. (*See* Mackenzie, P. W., assignor.)			
34,377	Smith, Alba F	Norwich, Conn	Locomotives, trucks for	Feb. 11, 1862.
36,536	Smith, Alba F., and Webster Wagner	Norwich, Conn	Ventilating railroad cars	Sept. 23, 1862.
35,785	Smith, Alfred E	Bron, N. Y	Axles, attaching thills to	July 1, 1862.
36,579	Smith, B. C	Burlington, N. J	Railways	Sept. 30, 1862.
35,712	Smith, B. H., and G. W. Archer	Ipswich, Mich	Harvesters	June 24, 1862.
35,400	Smith, Charles G	Mount Vernon, N. Y	Composition for water-proofing cloth, leather, &c	May 27, 1862.
34,649	Smith, Charles W	New York, N. Y	Matches, friction	Mar. 11, 1862.
34,788	Smith, Charles W., and Thomas D. Stetson	New York, N. Y	Shells, concussion, plungers for	Mar. 25, 1862.
36,307	Smith, Charles W	Evans, N. Y	Washing machines	Aug. 26, 1862.
34,169	Smith, Daniel C	Adrian, Mich	Stump extractors	Jan. 14, 1862.
35,183	Smith, Daniel C., and William P. Walling	Adrian, Mich	Water elevators and conveyors	May 6, 1862.
	Smith, D. M., *et al.* (*See* Ball, Thomas C., assignor.)			
34,219	Smith, E	Cold Spring Harbor, N. Y	Harvesters	Jan. 21, 1862.
35,986	Smith, Emerson	New Haven Mills, Conn	Shingle machines	May 13, 1862.
	Smith, E. M., and John Powers. (*See* Powers & Smith.)			
35,044	Smith, Ezekiel	Cold Spring Harbor, N. Y	Harvesters	April 22, 1862.
	Smith, Francis & Wells. (*See* Smith & Brown, assignors.)			
	Smith, Francis Bartlett, and John James Speed. (*See* Speed & Smith.)			
34,616	Smith, Francis W., assignor to S. S. White	Philadelphia, Pa	Pins, dentists', manufacture of	Mar. 4, 1862.
1,610	Smith, Garrettson, and Henry Brown, assignors to Smith, Francis & Wells.	Philadelphia, Pa	Stove, cook's (Design)	July 1, 1862.
1,622	Smith, Garrettson, and Henry Brown, assignors to Cox, Whiteman & Cox.	Philadelphia, Pa	Stove, cook's, plates of a (Design)	Aug. 5, 1862.
36,689	Smith, George Hand, assignor to Silas O. Smith	Rochester, N. Y	Illumination	Oct. 14, 1862.
	Smith, G. W. V., and R. M. Stivers. (*See* Stivers & Smith.)			
	Smith, G. W. V., and R. M. Stivers. (*See* Stivers & Smith.)			
35,184	Smith, Horace J., and Woodruff Jones	Philadelphia, Pa	Oils, coal, and other mixed liquids, apparatus for testing	May 6, 1862.
1,365	Smith, Isaac, assignor to S. H. Ransom & Co	Albany, N. Y	Grates for stoves (Reissue)	Dec. 16, 1862.
37,204	Smith, Isaac, assignor to S. H. Ransom & Co	Albany, N. Y	Grates for stoves	Dec. 16, 1862.
	Smith, J. C., and Joel Haag. (*See* Haag & Smith.)			
35,713	Smith, J. D	Peoria, Ill	Planters, seed	June 24, 1862.
35,978	Smith, J. H. and G. W., assignors to J. H. Smith	Port Chester, N. Y	Tombstones	July 22, 1862.
	Smith, Jacob A. (*See* Kelly, Daniel, assignor.)			
34,907	Smith, James S., jr	New York, N. Y	Embroidery imitation, metal	April 8, 1862.
35,185	Smith, Jeremiah P	Hummelstown, Pa	Corn-shellers	May 6, 1862.
36,865	Smith, Joel, jr	Allegheny City, Pa	Hinges for shutters	Nov. 4, 1862.
34,998	Smith, John U	Troy, N. Y	Sewing machines	April 15, 1862.
34,989	Smith, John E	New York, N. Y	Telegraphs, electro-magnetic	April 15, 1862.
35,571	Smith, John R., assignor to self and C. T. and I. N. Chester	New York, N. Y	Telegraphs, electro-magnetic	June 10, 1862.
35,634	Smith, Jonathan	Tiffin, Ohio	Drills, grain	June 17, 1862.
36,989	Smith, Jonathan	Tiffin, Ohio	Drills, grain	Nov. 18, 1862.
35,548	Smith, Joseph Nottingham	Jersey City, N. J	Fire-arms, repeating	June 10, 1862.
35,549	Smith, Joseph Nottingham	New York, N. Y	Lamps, coal-oil	June 10, 1862.
34,974	Smith, Leander E	New Haven, Conn	Indicators, railroad-station	Jan. 28, 1862.
37,142	Smith, Levi F	Stonington, Conn	Bottles, necks of, tools for forming the	Dec. 9, 1862.
34,275	Smith, Matthew	Pittsburg, Pa	Boilers, steam	Jan. 28, 1862.
36,994	Smith, M. H	Four Corners, Ohio	Saccharine liquids, apparatus for evaporating	Nov. 11, 1862.
35,387	Smith, Oliver C	Salem, Mass	Piston packing	May 13, 1862.
35,907	Smith, Oliver C	Salem, Mass	Vessels, submarine armament of	July 29, 1862.
	Smith, O. C., and J. Hodskinson. (*See* Hodskinson & Smith.)			
35,788	Smith, Orlando P	New York, N. Y	Pen-rack	July 1, 1862.
	Smith, Orren M. (*See* Williams, N. W., assignor.)			
34,074	Smith, Richard P., and Joseph R. Gates	Louisville, Ky	Ploughs, mole	Jan. 7, 1862.
34,650	Smith, Robert A	Newburyport, Mass	Fences	Mar. 11, 1862.
	Smith, Samuel A. (*See* Carey, John, assignor.)			
36,532	Smith, Samuel R., assignor to Lane & Bodley	Cincinnati, Ohio	Saw-mills, circular, head-blocks for	Sept. 23, 1862.
	Smith, Sheldon & Co. (*See* Ham, Robert, assignor.)			
37,181	Smith, Thomas, jr	Boston, Mass	Cups, dippers, &c., elastic, manufacture of	Dec. 16, 1862.
36,373	Smith, William E	Port Washington, Wis	Wells, apparatus for cleaning	Sept. 2, 1862.
37,200	Smith, Wilson H., assignor to self and R. M. Basset	Birmingham, Conn	Projectiles for rifled ordnance	Dec. 23, 1862.
36,806	Smood, W. S	Washington, D. C	Shells, combined time and concussion fuze for	Oct. 28, 1862.
34,703	Snedder, C. Edward	Baltimore, Md	Fire-arms, revolving	Mar. 18, 1862.
36,034	Snell, Daniel	Little Falls, N. Y	Harvesters	July 29, 1862.
36,035	Snell, Edward S	North Bridgewater, Mass	Boot-heel shave	July 29, 1862.
36,734	Snow, George K	Watertown, Mass	Bills, notes, &c., holders for	Oct. 21, 1862.
1,309	Snow, H. D	Rochester, N. Y	Valves, governor (Reissue)	May 13, 1862.
34,908	Snow, Oliver	West Meriden, Conn	Lamp chimneys, spring for	April 8, 1862.
36,942	Snyder, Benjamin	Trenton, N. J	Reading card	Aug. 19, 1862.
	Snyder, James S. (*See* Grant, W. T., assignor.)			
1,316	Snyder, John H	Troy, N. Y	Railroad chairs, manufacturing (Reissue)	June 3, 1862.
37,188	Solomon, Isaac	Baltimore, Md	Steaming oysters in the shell, apparatus for	Dec. 16, 1862.
	Soule, Warren, and Joseph W. Brooks. (*See* Boothby, Putnam S., assignor.)			
35,530	Southgate, B. F	Bridgewater, Vt	Sawing machine	June 10, 1862.
35,531	Southland, S. E	Jamestown, N. Y	Cattle, device for fastening	May 20, 1862.
34,651	Southmayd, John A	Jersey City, N. J	Evaporating, vacuum pans for	Mar. 11, 1862.
35,535	Southworth, William	Newcastle, Me	Camera, multiplying	June 17, 1862.
	Spain, Edward	Philadelphia, Pa	Churns (Extension)	April 30, 1862.
	Spalding, Rufus H. (*See* Towle, George P., assignor.)			
34,990	Spear, James	Philadelphia, Pa	Ash sifter	April 15, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35, 551	Spear, James	Philadelphia, Pa	Stove doors	June 10, 1862.
36, 323	Spears, Charles D., assignor to self and F. Buckman	Lisbon, Me	Water wheels	Aug. 26, 1862.
35, 900	Speed, John James, and Francis Bartlett Smith	Gorham, Me	Spirits, ardent, treating	July 15, 1862.
36, 970	Spence, George S. G	Salem, Mass	Jars and cans, preserving	Nov. 18, 1862.
36, 537	Spence, William T	St. Louis, Mo	Fan attachment to sewing machines	Sept. 23, 1862.
35, 767	Spencer A	Grampian Hills, Pa	Mills, cider	July 1, 1862.
34, 319	Spencer, C. M	South Manchester, Conn	Fire-arms, breech-loading	Feb. 4, 1862.
36, 083	Spencer, C. M., assignor to Charles Cheney	South Manchester, Conn	Fire-arms, breech-loading, cartridge retractor for	July 29, 1862.
34, 597	Spencer, Charles L	Providence, R. I	Motion, mode of converting	Mar. 4, 1862.
	Spencer, Edward, and John Schaffer. (*See* Schaffer & Spencer.)			
34, 378	Spencer, Edward	St. Louis, Mo	Ticket stamp, railroad	Feb. 11, 1862.
36, 114	Spencer, Edward	St. Louis, Mo	Stamps, hand	Aug. 5, 1862.
36, 243	Spencer, Edward	St. Louis, Mo	Marking machines	Aug. 19, 1862.
	Spencer, Geo. W., *et al.* (*See* Myers, Searles & Spencer.)			
34, 320	Spencer, Robert	Brooklyn, N. Y	Saddles, military or other riding	Feb. 4, 1862.
36, 376	Spencer, Robert	Brooklyn, N. Y	Saddles, harness	Sept. 2, 1862.
1, 290	Spencer, Thomas	Syracuse, N. Y	Salt, common manufacture of (Reissue)	Mar. 18, 1862.
1, 291	Spencer, Thomas	Syracuse, N. Y	Salt, common manufacture of (Reissue)	Mar. 18, 1862.
36, 735	Spencer, Thomas	Syracuse, N. Y	Salting meats	Oct. 21, 1862.
35, 332	Sperry, John	New York, N. Y	Veneer cutting machines	May 20, 1862.
35, 333	Spies, William T	Baltimore, Md	Car coupling, railroad	May 20, 1862.
35, 401	Sprague, Leonard A	Brooklyn, N. Y	Buckles	May 27, 1862.
37, 012	Sprout, A. B	Hughesville, Pa	Rakes, horse	Nov. 25, 1862.
34, 909	Squier, George L	Buffalo, N. Y	Harvester rakes	April 8, 1862.
36, 983	Squires, Sidney, assignor to C. B. Boyce & Co	Boston, Mass	Clothes-wringing machine	Nov. 18, 1862.
36, 538	Stackpole, Greenleaf	Portland, Me	Bit braces	Sept. 23, 1862.
	Stafford, R. J., and C. Whipple. (*See* Whipple & Stafford.)			
34, 075	Stagg, David J	New York, N. Y	Doors, device for closing	Jan. 7, 1862.
	Stallo, John H. (*See* Zettle, William, assignor.)			
1, 561	Stanard, Walter W., assignor to Jewett & Root	Buffalo, N. Y	Stove plates (Design)	April 1, 1862.
1, 565	Stanard, Walter W., assignor to Jewett & Root	Buffalo, N. Y	Stove (Design)	April 15, 1862.
1, 566	Stanard, Walter W., assignor to Jewett & Root	Buffalo, N. Y	Stove (Design)	April 15, 1862.
34, 220	Stange, Morits	New York, N. Y	Piano-fortes	Jan. 21, 1862.
36, 177	Stanley, James C	Lawrence, Mass	Spinning machines, throstle, bobbins of	Aug. 12, 1862.
35, 655	Stansell, Charles C., assignor to self and Aaron W. Rockwood.	Middleboro', Mass	Lamps	June 17, 1862.
35, 979	Stansell, Charles C., assignor to self and Aaron W. Rockwood.	Middleboro', Mass	Lamps	July 22, 1862.
36, 244	Starr, Eben J	New York, N. Y	Skates	Aug. 19, 1862.
36, 866	Starr, Joseph J	Cincinnati, Ohio	Ice clog	Nov. 4, 1862.
35, 114	Stead, Isaac	Philadelphia, Pa	Carding engines, condensing	April 29, 1862.
34, 652	Stearns, H. N	Thardon, Ohio	Churn dashers	Mar. 11, 1862.
34, 598	Stearns, L. L., assignor to self and L. N. Muir	Jersey Shore, Pa	Washing machine	Mar. 4, 1862.
35, 166	Stearns, Otis W	Johnson, Vt	Tubing, wooden	May 6, 1862.
34, 789	Stebbins, Carlos	Pike, N. Y	Sewing machines	Mar. 25, 1862.
36, 308	Stecher, P. A	New York, N. Y	Lamp-shade holder	Aug. 26, 1862.
	Steckel, Henry F. (*See* McNamee, James, assignor.)			
34, 221	Steere, Erastus N	Providence, R. I	Spindle bolsters	Jan. 21, 1862.
1, 271	Steinway, Henry, jr	New York, N. Y	Piano-forte actions (Reissue)	Feb. 4, 1862.
34, 910	Steinway, Henry, jr	New York, N. Y	Piano-forte actions	April 8, 1862.
36, 245	Steller, C. E	Genesee, Wis	Sod cutter	Aug. 19, 1862.
37, 061	Steller, C. E	Genesee, Wis	Harrow	Dec. 2, 1862.
	Stephenson, Thomas, and George A. Prince. (*See* Louis Lafayette, assignor.)			
37, 115	Stern, Edward, and James S. Newell	Dorchester, Mass	Button-hole cutters	Dec. 9, 1862.
34, 076	Stetson, S. C	North Bridgewater, Mass	Straw and hay cutters	Jan. 7, 1862.
	Stetson, Thomas D., and Charles W. Smith. (*See* Smith & Stetson.)			
34, 791	Stevens, C. A., and J. V. Rockwell	New York, N. Y	Stoves, portable	Mar. 25, 1862.
34, 991	Stevens, Chester D	Mendota, Ill	Saccharine juices, apparatus for evaporating	April 15, 1862.
34, 599	Stevens, Collins, and Munroe	Boston, Mass	Clocks	Mar. 4, 1862.
35, 115	Stevens, E. M	Boston, Mass	Clothes-wringer	April 29, 1862.
36, 868	Stevens, Edwin A	Hoboken, N. J	Vessels, war, means of protecting	Nov. 4, 1862.
36, 869	Stevens, Edwin A	Hoboken, N. J	Vessels-of-war, constructing and arming	Nov. 4, 1862.
35, 714	Stevens, Francis B	New York, N. Y	Engines, steam, method of heating feed-water for	June 24, 1862.
35, 788	Stevens, Francis B	New York, N. Y	Engines, steam, valves for heating feed-water for	July 1, 1862.
35, 789	Stevens, Francis B	New York, N. Y	Engines, steam, heating feed-water for	July 1, 1862.
36, 807	Stevens, Francis B	New York, N. Y	Condensers, surface	Oct. 28, 1862.
36, 808	Stevens, Francis B	New York, N. Y	Condensers, surface, shields for	Oct. 28, 1862.
36, 809	Stevens, Francis B	New York, N. Y	Condensers, surface	Oct. 28, 1862.
36, 810	Stevens, Francis B	New York, N. Y	Condensers, surface	Oct. 28, 1862.
34, 790	Stevens, James H	East Durham, N. Y	Manure, machines for spreading	Mar. 25, 1862.
	Stevens, John J., *et al.* (*See* Custer, George, assignor.)			
	Stevens, Phineas. (*See* Andrews, Luman, assignor.)			
	Stevens, Simon. (*See* Wheeler, Norman W., assignor.)			
1, 557	Stevens, Wm. W., assignor to Nath'l P. Richardson & Co	Portland, Me	Stove, cooking (Design)	Mar. 25, 1862.
	Stevens, George. (*See* Boyle, James E., assignor.)			
34, 704	Stevens, James F., and Theo. B. Hammer	McKeesport, Pa	Axles, mode of lubricating	Mar. 18, 1862.
35, 116	Steward, A	Piano, Ill	Scissors, counter, stationary	April 29, 1862.
36, 115	Stewart, Enoch	Battle Creek, Mich	Water wheels, currents	Aug. 5, 1862.
	Stewart, Philo P. (*See* Howard, Luther W., assignor.)			
34, 450	Stewart, Robert W	Philadelphia, Pa	Gas-burners	Feb. 18, 1862.
36, 178	Stibbs, Thomas	Wooster, Ohio	Looms	Aug. 12, 1862.
37, 613	Stillman, Orseamus G	Fabius, N. Y	Batteries, marine, means of affixing defensive armor plates to.	Nov. 25, 1862.
	Stimets, C. P. (*See* Hall, E. J., assignor.)			
	Stimets, C. P. (*See* Fairchild, John H., assignor.)			
36, 487	Stimpson, James	Baldwinsville, Mass	Journals and journal boxes	Sept. 16, 1862.
	Stimpson, J. C., *et al.* (*See* Jenkins, Jacob, assignor.)			
36, 127	Stiven, James H., assignor to self, Michael Tourney and John Elder, jr.	New York, N. Y	Valves, air, for steam apparatus	Aug. 5, 1862.
36, 128	Stiven, James M., assignor to self, Michael Tourney and John Elder, jr.	New York, N. Y	Boilers, steam, fire regulators for	Aug. 5, 1862.
36, 324	Stiven, James M., assignor to self, Michael Tourney and John Elder, jr.	New York, N. Y	Boiler feeder	Aug. 26, 1862.
36, 310	Stivers, R. M., and G. W. V. Smith	New York, N. Y	Carriages, "fifth wheel" of	Aug. 26, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
36, 539	Stivers, R. M., and G. W. V. Smith	New York, N. Y	Carriage tops and backs, shifting	Sept. 23, 1862.
34, 600	St. John, William W	Pleasant Mount, N. J	Water-wheels, current	Mar. 4, 1862.
34, 085	Stock, James C., and James E. Emerson	Trenton, N. J	Steel, process for making	Jan. 7, 1862.
34, 451	Stockwell, A., and B. D. Humes	Millbury, Mass	Looms	Feb. 18, 1862.
35, 491	Stokes, Benjamin S., assignor to self and Wm. H. Burwick	Manchester, N. H	Cigars and pipes, mouth-pieces for	June 3, 1862.
36, 870	Stone, Joel	Cleveland, Ohio	Windlass	Nov. 4, 1862.
37, 014	Stone, N. F	Athens, Ill	Saws, machine for gumming	Nov. 25, 1862.
	Stove, Winsor. (*See* Clow, Phillip R., assignor.)			
36, 580	Storer, J. J., and James D. Whelpley	Boston, Mass	Mills, grinding	Sept. 30, 1862.
36, 927	Storms, Hiram	Ann Arbor, Mich	Carding engines	Nov. 11, 1862.
35, 479	Stout, Jacob W	Raritan, N. J	Harvesters	June 3, 1862.
35, 129	Stover, Henry D., and W. W. W. Wood, assignors to Henry D. Stover.	New York, N. Y	Vessels, &c., shutters for the port-holes of	April 29, 1862.
35, 492	Stover, H. D., and Edward S. Wright, assignors to Henry D. Stover.	New York, N, Y	Sawing machines, scroll	June 3, 1862.
36, 036	Stow, William	Utica, N. Y	Ordnance, breech-loading	July 29, 1862.
36, 824	Stowell, Charles, assignor to himself and William M. Gaylord.	Concord, Mass	Electrical currents, blasting by	Oct. 28, 1862.
36, 259	Stratton, Richard A., assignor to G. W. Carr & Co	Philadelphia, Pa	Steel, strips of, apparatus for hardening	Aug. 19, 1862.
36, 260	Stratton, Richard A., assignor to G. W. Carr & Co	Philadelphia, Pa	Umbrellas and parasols, joints for ribs of	Aug. 19, 1862.
36, 261	Stratton, Richard A., assignor to G. W. Carr & Co	Philadelphia, Pa	Umbrellas and parasols, tips for	Aug. 19, 1862.
34, 792	Stray, M. L. and O. A	Willoughby, Ohio	Fruit-baskets	Mar. 25, 1862.
35, 901	Street, John W	Salem, Ohio	Harvesters	July 15, 1862.
34, 633	Street, Zadok	Salem, Ohio	Roofing, cement and tile	Mar. 11, 1862.
35, 843	Street, Zadok	Salem, Ohio	Brick and tile machines	July 8, 1862.
35, 280	Streeter, Alonzo, assignor to self, Thomas Farrar and Amzi Chase.	Adrian, Mich	Planters, corn	May 13, 1862.
	Streeter, L. (*See* Ammidon, John, assignor.)			
35, 268	Strong, Calvin A	Brooklyn, N. Y	Fences, earth, mode of building and coating	May 13, 1862.
	Strong, Francis M., *et al.* (*See* Howe, Strong & Ross.)			
36, 678	Strong, Francis M., and Thomas Rose	Brandon, Vt	Scales, platform	Oct. 14, 1862.
37, 208	Strong, Samuel	Washington, D. C	Fire-arm, breech-loading	Dec. 16, 1862.
34, 077	Strong, W. O	Detroit, Mich	Registers, weighing	Jan. 7, 1862.
34, 379	Strong, William O	Detroit, Mich	Grain in elevator bins, device for distributing	Feb. 11, 1862.
34, 793	Struve, F. G. L	Jefferson, Wis	Racks, feed	Mar. 25, 1862.
	Stuart & Peterson. (*See* Martino & Horton, assignors.)			
34, 380	Stuart, Levi U	Brooklyn, N. Y	Bellows	Feb. 11, 1862.
	Stubbs, Z. (*See* Hornaday, Nelson, assignor.)			
	Stuck, Van R., *et al.* (*See* Feezler, Stephen M., assignor.)			
35, 844	Stump, George	New York, N. Y	Saccharine liquids, evaporating pans for	July 8, 1862.
34, 321	Stunts, George R	Superior, Wis	Anemometers	Feb. 4, 1862.
35, 902	Sturtevant, Benjamin F	Boston, Mass	Shoe pegs, preparation of	July 15, 1862.
36, 037	Sturtevant, Benjamin F	Boston, Mass	Shells, explosive fuze for	July 29, 1862.
36, 038	Sturtevant, Benjamin F	Boston, Mass	Shells, explosive fuze for	July 29, 1862.
36, 039	Sturtevant, Benjamin F	Boston, Mass	Shells, explosive fuze for	July 29, 1862.

36, 116	Sturtevant, Benjamin F	Boston, Mass	Projectiles for rifled ordnance	Aug. 5, 1862.
36, 626	Sugett, Samuel H	Eden, Me	Reaming out the barrels of ships' pumps, instrument for	Oct. 7, 1862.
37, 116	Sunderland, Le Roy	Boston, Mass	Spermatorrhœa rings	Dec. 9, 1862.
36, 442	Sutton, John, assignor to himself and James Gregory	New York, N. Y	Sofa and vessels berth, combination	Sept. 9, 1862.
	Swallow, Freeman M., and Charles A. Cummings. (*See* Cummings & Swallow.)			
36, 425	Swan, James S	Monganp Valley, N. Y	Vehicles, wheeled, holdbacks for	Sept. 9, 1862.
34, 911	Swan, Jefferson L	Lowville, N. Y	Fire-arms	April 8, 1862.
35, 845	Swank, Matthias	Philadelphia, Pa	Boilers, steam, of cinders, relieving	July 8, 1862.
1, 313	Swarts, Jacob	Buffalo, N. Y	Harvesters (Reissue)	June 3, 1862.
1, 314	Swarts, Jacob	Buffalo, N. Y	Harvesters (Reissue)	June 3, 1862.
1, 315	Swarts, Jacob	Buffalo, N. Y	Harvesters (Reissue)	June 3, 1862.
36, 736	Sweet, Miles	Troy, N. Y	Curry-combs	Oct. 21, 1862.
37, 015	Sweet, Orrin, and Merrill E. Hicks	Providence, R. I	Pumps, rotary, packing for	Nov. 25, 1862.
34, 078	Sweet, William A	Syracuse, N. Y	Saws, scroll	Jan. 7, 1862.
34, 336	Sweeney, Chas. E., assignor to himself and Wm. W. Hooten	Charlestown, Mass	Knapsack	Feb. 4, 1862.
	Swift, Alexander. (*See* Frost & Monroe, assignors.)			
34, 912	Swift, Almon	Wolcott, Vt	Corn-shellers	April 8, 1862.
34, 276	Swift, Daniel W	West Falmouth, Mass	Clothes-wringing machine	Jan. 28, 1862.
34, 992	Tykes, J. W	Chicago, Ill	Elevators and dryers, grain, floating	April 15, 1862.
35, 045	Taber, John M	Greenwich, N. Y	Elevators, hay	April 22, 1862.
36, 040	Taft, Benjamin F	Blackstone, Mass	Pessaries	July 29, 1862.
34, 170	Taggart, John	Roxbury, Mass	Pegging machines	Jan. 14, 1862.
36, 826	Tagliabue, Guiseppe	New York, N. Y	Oil, coal, apparatus for testing	Oct. 28, 1862.
36, 488	Tagliabue, John	New York, N. Y	Oil, coal, apparatus for testing	Sept. 16, 1862.
35, 269	Tainter, George	Watertown, Mass	Dampers, ventilating	May 13, 1862.
36, 679	Tainter, George	Watertown, Mass	Dampers, ventilating	Oct. 14, 1862.
36, 922	Taliaferro, C. W	Keithsburg, Ill	Cultivators	Nov. 11, 1862.
34, 171	Taliaferro, Nicholas	Augusta, Ky	Ordnance, revolving	Jan. 14, 1862.
35, 790	Tapley, Joseph A	Somerville, Mass	Sewing machines, hand	July 1, 1862.
36, 428	Tanner, J. H	Farrenfeld, Switzerland	Paper, machine for folding and stitching	Sept. 9, 1862.
34, 794	Tanquary, David	Carmi, Ill	Stump-extractors	Mar. 25, 1862.
35, 046	Tansley, William	Salisbury Centre, N. Y	Horses' hoofs, tools for paring	April 22, 1862.
34, 601	Tapley, J. F	Springfield, Mass	Printing and cutting device	Mar. 4, 1862.
	Tapley, Samuel T. (*See* Dearborn, G. K., assignor.)			
35, 552	Taplin, Albert	Providence, R. I	Lamps, coal-oil, burners for	June 10, 1862.
36, 680	Taplin, Albert	Providence, R. I	Lamps	Oct. 14, 1862.
	Tarbox, Erastus. (*See* Gill, H. B., assignor.)			
35, 334	Tatham, Charles B	Brooklyn, N. Y	Balls, Minie, apparatus for casting	May 13, 1862.
	Tatham, Charles B. (*See* Fitzgerald, Daniel, assignor.)			
	Tauber, John A., and Frederick Franck. (*See* Muller, Julius J., assignor.)			
36, 867	Tawrines, J. M. H. A	Paris, France	Balances, spring	Nov. 4, 1862.
	Taylor, A. A. (*See* Read, Dan, assignor.)			
1, 611	Taylor, George, and James Lasty	Amesbury, Mass	Shoes (Design)	July 1, 1862.
	Taylor, H., *et al.* (*See* Allen, Chester F., assignor.)			
	Taylor, James S. (*See* Fenning, James, assignor.)			
	Taylor, James S. (*See* Blackman, Edwin, assignor.)			
35, 270	Taylor, John	Magnolia, Ill	Harvesters, rakes for	May 13, 1862.
36, 971	Taylor, John, and R. W. Brown	Westerly, R. I	Lighter, hydrogen, Dobereiner	Nov. 18, 1862.
	Taylor, John, and James W. Armstrong. (*See* Armstrong & Taylor.)			

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35,117	Taylor, N. W., and J. W Brightman	Cleveland, Ohio	Paper, sized, machines for drying	April 29, 1862.
34,533	Taylor, S. J	Rome, N. Y	Straw-cutter and corn-sheller, convertible	Feb. 25, 1862.
36,041	Taylor, Thomas R.	Cleveland, Ohio	Horseshoes, machines for making	July 29, 1862.
36,737	Taylor, T. R.	Cleveland, Ohio	Nuts, machines for making	Oct. 21, 1862.
	Taylor, William N., and William P. Battey. (*See* Battey & Taylor.)			
	Taylor, William N., *et al.* (*See* Quann, William, assignor.)			
36,311	Teal, A. E., and William Ransom	Cicero, Ind.	Smut and grain cleaning machines	Aug. 26, 1862.
34,913	Teed, George	New York, N. Y.	Banjoes	April 8, 1862.
	Tefft, Benjamin F. (*See* Russell, Samuel R., assignor.)			
36,117	Templeton, Alonzo	Chicago, Ill.	Boat, shallow-water	Aug. 5, 1862.
	Ten Eyck, Conrad A. (*See* Grimshaw, Wm. D., assignor.)			
1,575	Terhune, Henry	New York, N. Y.	Clock case (Design)	May 6, 1862.
36,681	Terry, William	Birmingham, Eng.	Fire-arms, breech-loading	Oct. 14, 1862.
36,129	Thatcher, John, assignor to himself and George Lyon	Brooklyn, Ohio	Washing machine	Aug. 5, 1862.
36,312	Thayer, Eli	Worcester, Mass.	Angulometers, plane	Aug. 26, 1862.
35,715	Thayer, John Adams	Boston, Mass.	Tools	June 24, 1862.
	Thersason, Lewis F., and Hiram Ketcham, jr. (*See* Seymour, Edward L., assignor.)			
35,553	Thierry, James	Aurora, Ill.	Grindstones, machines for turning off	June 10, 1862.
35,958	Thiry, Pierre	Paris, France	Horseshoes	July 22, 1862.
1,331	Thomas, Chauncey, assignor to himself and Daniel P. Nichols.	Roxbury, Mass.	Carriage props (Reissue)	Aug. 26, 1862.
35,554	Thomas, George M.	New York, N. Y.	Lemon squeezer	June 10, 1862.
34,925	Thomas, H. B., assignor to J. W. English	Racine, Wis.	Dampers	April 8, 1862.
35,636	Thomas, J. H., and P. P. Mast	Springfield, Ohio	Drills, seed	June 17, 1862.
35,281	Thomas, John, assignor to himself and John M. Lord	Indianapolis, Ind.	Rolling pile of railroad iron, rolls for	May 13, 1862.
34,795	Thomas, L. H.	Waterbury, Vt.	Clothes-wringer	Mar. 25, 1862.
	Thomas Manufacturing Company. (*See* Everitt, Sheldon B., assignor.)			
	Thomas, Samuel, *et al.* (*See* Feezler, Stephen M., assignor.)			
34,391	Thomas, Samuel Thomas	Laconia, N. H.	Looms, fancy	Feb. 11, 1862.
34,852	Thomas, Samuel T.	Laconia, N. H.	Knitting machines	April 1, 1862.
34,654	Thomas, William R., and Morgan Emanuel, jr.	Catasauqua, Pa.	Powder, blasting	Mar. 11, 1862.
37,117	Thomas, W. R., and M. Emanuel, jr.	Catasauqua, Pa.	Powder, blasting, composition for	Dec. 9, 1862.
36,118	Thompson, G. J. E.	Providence, R. I.	Links, adjustable	Aug. 5, 1862.
35,402	Thompson, G. W.	New York, N. Y.	Gas-burners, self-regulating	May 27, 1862.
36,179	Thompson, G. W., and A. H. Rogers	Marion, Iowa	Sugar juice evaporator	Aug. 12, 1862.
1,525	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,526	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,527	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,528	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,529	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,530	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.

1,531	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,532	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,533	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,534	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,535	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,536	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,537	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,583	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Feb. 11, 1862.
1,584	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	May 20, 1862.
1,585	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	May 20, 1862.
1,586	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	May 20, 1862.
1,587	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	May 20, 1862.
1,588	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	May 20, 1862.
1,589	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	May 20, 1862.
1,590	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	May 20, 1862.
1,591	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	May 20, 1862.
1,592	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	May 20, 1862.
1,593	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	May 20, 1862.
1,594	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	May 20, 1862.
36,738	Thompson, Henry G.	New York, N. Y.	Carpet pattern (Design)	May 20, 1862.
1,683	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpets, machinery for sizing the backs of	Oct. 21, 1862.
1,684	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Dec. 9, 1862.
1,685	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Dec. 9, 1862.
1,686	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Dec. 9, 1862.
1,687	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Dec. 9, 1862.
1,688	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Dec. 9, 1862.
1,689	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Dec. 9, 1862.
1,690	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Dec. 9, 1862.
1,691	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Dec. 9, 1862.
1,692	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Dec. 9, 1862.
1,693	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Dec. 9, 1862.
1,694	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern (Design)	Dec. 9, 1862.
36,246	Thompson, J., and D. D. Dalrymple	Cross Roads, Ohio	Sawing machine	Aug. 19, 1862.
36,811	Thompson, James, assignor to Julia A. Thompson	Vevay, Ind.	Churns	Oct. 28, 1862.
	Thompson, J. B. (*See* Garel, J. H., assignor.)			
36,540	Thompson, James M. and R. M.	Coshocton, Ohio	Jacks, lifting	Sept. 23, 1862.
25,337	Thompson, Julius	Taunton, Mass.	Screw-drivers	May 20, 1862.
34,926	Thompson, Rosewell, assignor to himself, J. C. Wilder, and Zelotes W. Holden, jr.	Boston, Mass.	Sewing machines	April 8, 1862.
34,382	Thompson, W. H.	Cleveland, Ohio	Railroad switch	Feb. 11, 1862.
37,062	Thompson, W. H.	Cleveland, Ohio	Horseshoe machines	Dec. 2, 1862.
34,080	Thompson, William S.	Rochester, N. Y.	Lamps	Jan. 7, 1862.
37,183	Thompson, William S.	Rochester, N. Y.	Lamp chimneys, spring fastening for	Dec. 16, 1862.
36,682	Thoms, W. O., and A. M. Miller	Fon du Lac, Wis.	Journal boxes	Oct. 14, 1862.
35,336	Thomson, James E.	Buffalo, N. Y.	Gas, illuminating, manufacture of	May 20, 1862.
36,627	Thomson, James E.	Buffalo, N. Y.	Gas, illuminating, apparatus for manufacture of	Oct. 7, 1862.
35,047	Thomson, William	Detroit, Mich.	Saccharine juices, apparatus for evaporating	April 22, 1862.
36,042	Thorp, James E.	New York, N. Y.	Pumps	July 29, 1862.
36,247	Thorp, Stillman	Turner, Maine	Car coupling	Aug. 19, 1862.
	Thoubboron, James, *et al.* (*See* Bennett, Erastus S., assignor.)			
36,180	Tiebenor, Edwin S.	Jacksonville, N. Y.	Cultivators	Aug. 12, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35,716	Tiffi, J. D.	Cuyahoga Falls, Ohio	Clothes-wringer and mangle combined	June 24, 1862.
	Tilden, Howard. (*See* Paine, Calvin H., assignor.)			
	Tilton, Joseph, *et al.* (*See* Morgan, Jay, Edwards & Tilton.)			
35,048	Tilton, Joseph C.	Genesco, Ill.	Ordnance for use under water	April 22, 1862.
35,846	Timby, Theodore R.	Worcester, Mass.	Battery tower, revolving	July 8, 1862.
35,847	Timby, Theodore R.	Worcester, Mass.	Guns in revolving towers by electricity, discharging	July 8, 1862.
36,593	Timby, Theodore R.	Worcester, Mass.	Battery tower, revolving	Sept. 30, 1862.
36,871	Timby, Theodore R.	Worcester, Mass.	Warming apparatus, portable	Nov. 4, 1862.
36,872	Timby, Theodore R.	Worcester, Mass.	Barometers, mercurial	Nov. 4, 1862.
34,931	Timmins, Thomas A., and A. F. W. Edwards	Philadelphia, Pa.	Tents, hammock	April 8, 1862.
34,914	Timmons, Samuel H.	Memphis, Tenn.	Lamps, locomotive	April 8, 1862.
37,018	Titus, Samuel H.	St. Louis, Mo.	Barrels and casks, oil-coating for	Nov. 25, 1862.
36,198	Tobey, Enoch G., assignor to himself and Josephus Nash.	Portland, Me.	Lantern, kerosene	Aug. 12, 1862.
	Tobey, Samuel Boyd. (*See* Greene, John F., assignor.)			
	Tobey, Samuel Boyd. (*See* Greene, John F., assignor.)			
35,403	Tobias, Benjamin	Washington, Ill.	Ditching machines	May 27, 1862.
35,658	Tobias, John C., assignor to himself and Henry C. Kirk	Middleport, Ill.	Saddles, harness	June 17, 1862.
37,184	Todd, Morris	Quasqueton, Iowa	Seeding machines	Dec. 16, 1862.
	Toepken, Victor, and Edward Precht. (*See* Precht & Toepken.)			
36,248	Tompkins, Samuel E.	Newark, N. J.	Saddles, harness, hooks and terrets for	Aug. 19, 1862.
35,049	Topham, James S.	Washington, D. C.	Harness, slide for	April 22, 1862.
	Tower, Levi L. (*See* Shaw, Wm. W., assignor. Reissue.)			
35,848	Towers, William H.	New York, N. Y.	Skirts, skeleton	July 8, 1862.
36,313	Towers, William H.	New York, N. Y.	Pins	Aug. 26, 1862.
36,972	Towers, William H.	New York, N. Y.	Penholders	Nov. 18, 1862.
37,249	Towers, William H.	New York, N. Y.	Cork	Dec. 23, 1862.
	Towle, George P. (*See* Critcherson, John, assignor.)			
35,911	Towle, George P., assignor to self and Rufus H. Spalding.	Boston, Mass.	Clothes-wringer	July 15, 1862.
	Towne, William J., and John Magee. (*See* Magee & Towne. Reissue.)			
	Towne, William J. (*See* Magee, John, assignor. Reissue.)			
	Townsend, Elmer. (*See* Sargent, Joseph F., assignor.)			
	Townsend, Elmer. (*See* Sargent, Joseph F., assignor.)			
	Townsend, Elmer. (*See* Roper, S. H., assignor.)			
34,602	Townsend, Elmer.	Boston, Mass.	Shot, canister, or case for ordnance	Mar. 4, 1862.
	Townsend, Elmer. (*See* Roper, S. H., assignor.)			
34,915	Townsend, Elmer.	Boston, Mass.	Sewing machines	April 8, 1862.
34,603	Townsend, George O.	Boston, Mass.	Tents	Mar. 4, 1862.
36,314	Townsend, J. F.	Cambridgeport, Mass.	Spermatorrhœal rings	Aug. 26, 1862.
36,883	Townsend, John F., assignor to self and Paschal P. Pratt.	Westfield, N. Y.	Hinges, butt	Nov. 4, 1862.
1,653	Townsend, Matthew	Chelsea, Mass.	Shawls, &c., border of (Design)	Oct. 14, 1862.
34,705	Tracy, Albert	United States army	Fire-arms, tompion for	Mar. 18, 1862.
35,493	Tracy, Dwight, assignee to self and Joseph P. Hale.	Worcester, Mass.	Thread, sewing, spools for	June 3, 1862.
36,973	Trant, Frederick A.	New Britain, Conn.	Bench-gauge, carpenters'	Nov. 18, 1862.
34,918	Travis, Andrew Rice.	Brandon, Mich.	Drills, seed, and cultivators	April 8, 1862.
1,272	Treadwell, Daniel	Cambridge, Mass.	Cannon, manufacture of (Reissue)	Feb. 4, 1862.
37,017	Treadwell, Daniel	Cambridge, Mass.	Cannon, device for firing	Nov. 25, 1862.
34,322	Treadwell, John G.	Albany, N. Y.	Stoves, cook	Feb. 4, 1862.
34,323	Treadwell, John G., and William Hailes.	Albany, N. Y.	Stoves, hot-air, parlor	Feb. 4, 1862.
35,637	Treadwell, W. B.	Albany, N. Y.	Ordnance, breech-loading	June 17, 1862.
36,974	Treadwell, W. B.	Albany, N. Y.	Stoves	Nov. 18, 1862.
34,554	Treat, J. Lawson, assignor to Yale & Curtis	New York, N. Y.	Drawing apparatus for portable vessels	Feb. 25, 1862.
35,572	Treat, Robert M., assignor to self and George H. Daley.	Morris, Conn.	Rakes, horse	June 10, 1862.
	Treat, Robt. M., and Geo. H. Daley. (See Daley & Treat.)			
37,063	Tremper, John	Buffalo, N. Y.	Engines, steam, variable cut-off for	Dec. 2, 1862.
37,064	Tremper, John	Buffalo, N. Y.	Governors, centrifugal	Dec. 2, 1862.
36,341	Trimmer, Benjamin F.	Rochester, N. Y.	Grain, scouring and cleaning	Sept. 23, 1862.
35,639	Trinks, G., and L. Keltkamp	New York, N. Y.	Books in the round, machine for cutting	June 17, 1862.
34,172	Tripp, Seth D.	Stoneham, Mass.	Boots and shoes, machines for cutting welts for	Jan. 14, 1862.
35,118	Tripp, Thomas	Amsterdam, N. Y.	Water-wheel	April 29, 1862.
36,873	Trimler, William H.	Burr Oak, Mich.	Blacking or polish, stove	Nov. 4, 1862.
36,262	Trittin, Emil, assignor to David Rice	Philadelphia, Pa.	Lamp-burners	Aug. 19, 1862.
36,859	Trow, C. W., assignor to Cyrus Wakefield.	South Reading, Mass.	Rotary machinery	July 8, 1862.
36,181	Trowbridge, George N.	Rollinsford, N. H.	Coupling, shaft	Aug. 12, 1862.
36,429	Tucker, Hiram	Newton, Mass.	Bed-bottom	Sept. 9, 1862.
	Tufts, Alfred, and Herbert Curtis. (*See* Curtis & Tufts.)			
34,655	Tufts, M. and S. G.	Mainville, Ohio	Sugar juices, apparatus for evaporating	Mar. 11, 1862.
37,250	Tufts, Otis	Boston, Mass.	Ordnance, operating	Dec. 23, 1862.
35,717	Tukey, Benjamin	Fifield, Me.	Fruit-gatherer	June 24, 1862.
35,050	Tunnicliff, J. R.	Van Hornesville, N. Y.	Fire-alarm	April 22, 1862.
36,249	Tunstill, William	Paterson, N. J.	Braiding machines	Aug. 19, 1862.
	Tuomey, Michael, *et al.* (*See* Stiven, James M., assignor.)			
	Tuomey, Michael, *et al.* (*See* Stiven, James M., assignor.)			
	Tuomey, Michael, *et al.* (*See* Stiven, James M., assignor.)			
34,277	Turnbull, Andrew	West Meriden, Conn.	Lamps	Jan. 28, 1862.
	Turner, Charles B., deceased, by Leander Turner, adm'r.	Buffalo, N. Y.	Cars, railroad, operating brakes of (Extension)	Nov. 13, 1862.
35,119	Turner, George	Cambridge, Ohio	Corn-shellers	April 29, 1862.
23,959	Turner, L. W., and H. H. Mix.	Meriden, Conn.	Trace-fastening	July 22, 1862.
35,849	Turner, Reuben D.	New York, N. Y.	Car-coupling	July 8, 1862.
	Turner, Samuel W., and G. C. Eaton (*See* Eaton & Turner.)			
36,325	Turpin, E. A.	New York, N. Y.	Ordnance, breech-loading	Aug. 26, 1862.
1,346	Tuttle, Charles F., administrator of assignors to E. A. and W. Tuttle and J. S. Bailey.	New York, N. Y.	Hot-air registers (Reissue)	Oct. 14, 1862.
37,016	Tuttle, C. R.	New Brighton, Pa.	Churns	Nov. 25, 1862.
34,324	Tweddle, Herbert W. C.	Great Britain	Distilling coal oil and other substances, apparatus for	Feb. 4, 1862.
34,706	Twickeler, Theodore	Boston, Mass.	Gun, needle	Mar. 18, 1862.
34,993	Twining, Alexander C.	New Haven, Conn.	Ice, apparatus for making	April 15, 1862.
35,051	Twining, Alexander C.	New Haven, Conn.	Cooling and freezing, apparatus for	April 22, 1862.
36,183	Twining, Alexander C.	New Haven, Conn.	Engines, steam, condensers for	Aug. 12, 1862.
36,812	Twining, Alexander C.	New Haven, Conn.	Timbers, mode of uniting	Oct. 28, 1862.
	Tyler, C. H., *et al.* (*See* Morgan, Tyler & McClave.)			
1,629	Tyler, Henry G.	Andover, Mass.	Trade-mark (Design)	Aug. 12, 1862.
	Tyler, S. E., and W. M. Jones. (*See* Jones & Tyler.)			
34,452	Tyng, Levi B.	Lowell, Mass.	Railroad joints or chairs	Feb. 18, 1862.
	Tyson, J. F. (*See* Otis, Frederick S., assignor. Design.)			

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
	Tyson, J. F. (*See* Otis, Frederick S., assignor. Design.)			
35, 718	Uhl, Charles A	Millersburg, Ohio	Cultivators	June 24, 1862.
34, 337	Ulmer, Philip, assignor to himself, S. H. Worman, and Jos. O. Ely.	Philadelphia, Pa	Knife and fork, construction of	Feb. 4, 1862.
34, 338	Ulmer, Philip, assignor to himself, S. H. Worman, and Jos. O. Ely.	Philadelphia, Pa	Camp spoon	Feb. 4, 1862.
	Underwood, C. J. & W. J. (*See* McCall & Sloper, assignors.)			
36, 814	Underwood, Henry	New York, N. Y	Belt-coupling	Oct. 28, 1862.
36, 739	Underwood, J. A	Grand River, Ia	Harrow and seed drill, combined	Oct. 21, 1862.
	Union Glass Company. (*See* Matthews, Wm. H., assignor.)			
37, 079	Uren, Richard, Thomas Dunstone, and Joseph Blight	Eagle Harbor, Mich	Fuse, safety, machinery for manufacturing	Dec. 2, 1862.
	Utter, Isaac, and Orlando Clarke. (*See* Clarke & Utter.)			
37, 205	Valentine, E., and M. T. Ridout, assignors to themselves and William Beck.	Milwaukie, Wis	Spouts, metallic, bending	Dec. 16, 1862.
35, 791	Valentine, James H	Sparta, Ill	Bee-hives	July 1, 1862.
	Valentine, Wm. T. (*See* Vandersee, Cornelius, assignor.)			
35, 638	Van Allen, C. D	Syracuse, N. Y	Churns	June 17, 1862.
35, 792	Van Anden, William	Poughkeepsie, N. Y	Harvesters	July 1, 1862.
36, 430	Van Anden, William	Poughkeepsie, N. Y	Harvesters	Sept. 9, 1862.
35, 385	Van Anken, Miner	Amsterdam, N. Y	Clothes-wringer	May 20, 1862.
35, 903	Van Brocklin, Philip C	Buffalo, N. Y	Motion, converting rotary into reciprocating	July 15, 1862.
35, 960	Van Brunt, George W	Horicon, Wis	Seeding machines	July 22, 1862.
	Van Buren, James, *et al.* (*See* Barker, Wm. P., assignor.)			
34, 123	Vanderburgh, George E., assignors to Liquid Quarts Co	Mamaroneck, N. Y	Emery wheels and grinding surfaces, forming	Jan. 7, 1862.
34, 707	Vanderburgh, George E	Mamaroneck, N. Y	Casks, oil-proof	Mar. 18, 1862.
1, 297	Vanderburgh, Geo. E., assignor to the Liquid Quarts Co	New York, N. Y	Preparation of soluble silicates (Reissue)	April 1, 1862.
35, 741	Vandersee, Cornelius, assignor to himself and William T. Valentine.	Albany, N. Y	Bung-cutters	June 24, 1862.
34, 604	Van Deusen, J. B	New York, N. Y	Car-coupling	Mar. 4, 1862.
	Van Dyne, John, and A. C. Baker. (*See* Baker & Van Dyne.)			
35, 850	Van Gieson, A. H	Newark, N. J	Leather-splitting machine	July 8, 1862.
34, 534	Van Gieson, W. H	New York, N. Y	Nails for sheathing	Feb. 25, 1862.
35, 961	Van Hora, Jacob	Plainfield, Ill	Cultivators	July 22, 1862.
36, 683	Van Kannel, Theophilus	Chester, Ill	Cherries, machine for stoning	Oct. 14, 1862.
36, 130	Van Nortwick, Wm. H., assignor to himself and R. S. Van Rensselaer.	Bordentown, N. J	Chair, reclining	Aug. 5, 1862.
34, 917	Van Orden, Linn	Ithaca, N. Y	Lamp chimneys, mica	April 8, 1862.
35, 187	Van Ormer, R., and Wm. J. Bell	McAllisterville, Pa	Millstones, balancing	May 6, 1862.
	Van Rensselaer, R. S. (*See* Van Nortwick, Wm. H., ass'or.)			
35, 130	Vanstone, Samuel, assignor to himself and Wm. P. Pierce	Providence, R. I	Files, machines for cutting	April 29, 1862.
	Van Wagner, Jacob Mott. (*See* Browne, J. W., assignor.)			
34, 173	Van Winkle, J. E., and Joshua Mason	Paterson, N. J	Water-meters	Jan. 14, 1862.
34, 708	Varney, Thomas	San Francisco, Cal	Amalgam, gold and silver, device for straining	Mar. 18, 1862.
35, 904	Varney, Thomas	San Francisco, Cal	Amalgamating machine for gold and silver	July 15, 1862.
37, 185	Varney, Thomas	San Francisco, Cal	Amalgamators for gold and silver	Dec. 16, 1862.

35, 404	Vaughan, Aaron C	Bedford, Pa	Fire-arms, revolving	May 27, 1862.
	Veazey, William. (*See* Farrell, Joseph O., assignor.)			
35, 337	Vedder, Madison	New York, N. Y	Bandages and receptacles, catamenial and urinal	May 20, 1862.
1, 661	Vedder, N. S., and Ezra Ripley, assignors to N. S. Vedder	Troy, N. Y	Stoves, plates of a (Design)	Sept. 23, 1862.
35, 719	Vendrand, Joseph	Paris, France	Planes	June 24, 1862.
34, 656	Vergnes, Maurice	New York, N. Y	Galvanic batteries, liquids for exciting	Mar. 11, 1862.
36, 385	Vester, Franz, assignor to Charles Wagner	Pforzheim, Baden	Boots and shoes, soles of, device for protecting	Sept. 2, 1862.
36, 431	Vial, John	Cleveland, Ohio	Engines, steam, low-pressure, pump for	Sept. 9, 1862.
35, 657	Vickers, John H., assignor to Lucius W. Pond	Worcester, Mass	Fire-arms, revolving	June 17, 1862.
34, 363	Vincent, James, and Samuel Leslie	Quasqueton, Ia	Churns	Feb. 11, 1862.
35, 640	Virdin, W. W	Baltimore, Md	Engine, rotary	June 17, 1862.
37, 261	Vogt, David, assignor to Simon Guiterman	London, G. B	Vests	Dec. 23, 1862.
35, 641	Vogt, William	Louisville, Ky	Shirt-studs, mode of fastening	June 17, 1862.
35, 339	Vorn Hoff, Julius	New York, N. Y	Fishing rods, tips for	May 20, 1862.
35, 365	Vosburgh, Wm. C., and Wm. A. Ludden	Brooklyn, N. Y	Pencils, means of attaching India-rubber to	May 20, 1862.
34, 657	Vose, Richard	New York, N. Y	Car springs	Mar. 11, 1862.
36, 813	Vose, Richard	New York, N. Y	Car springs	Oct. 28, 1862.
	Vulcan Iron Works Company. (*See* Moore, Joseph, ass'r.)			
35, 951	Waeker, Louis	Buffalo, N. Y	Billiard cushions, lining	July 8, 1862.
34, 096	Wade, John	Richmond, Ind	Cane and steel, convertible	Jan. 7, 1862.
1, 323	Wade, N. K., and Joseph Kaye	Pittsburg, Pa	Car wheels (Reissue)	July 8, 1862.
1, 326	Wade, Nicholas K., and Joseph Kaye	Pittsburg, Pa	Wheels, metallic, for fly-wheels, &c (Reissue)	July 22, 1862.
1, 264	Wade, Wm. W	Longmeadow, Mass	Sewing machines (Reissue)	Jan. 28, 1862.
	Wadhams, M., and D. C. Rand. (*See* Rand & Wadhams.)			
	Wadhams, M., and D. C. Rand. (*See* Rand & Wadhams.)			
35, 642	Wadman, W. B	Boston, Mass	Coal-sifters	June 17, 1862.
35, 190	Wadsworth, Charles	New York, N. Y	Ventilators, car	May 6, 1862.
	Wagner, Charles. (*See* Vester, Franz, assignor.)			
	Wagner, Webster, and Albe F. Smith. (*See* Smith & Wagner.)			
36, 184	Wahl, Christian	Chicago, Ill	Oil from pigs' feet	Aug. 12, 1862.
37, 262	Walt, Windsor B., assignor to himself and Joseph A. Fairbanks.	Greenwood, Mass	Feed-bags for horses and other animals	Dec. 23, 1862.
	Waite, James H., and Rodney Hunt. (*See* Hunt & Waite.)			
	Wakefield, Cyrus. (*See* Trow, C. W., assignor.)			
	Wakefield, Cyrus. (*See* Mayall, Thomas J., assignor.)			
	Wakefield, Cyrus. (*See* Mayall, Thomas J., assignor.)			
	Wakefield, Cyrus. (*See* Mayall, Thomas J., assignor.)			
	Wakefield, Horace P. (*See* Clogston, Thomas S., assignor.)			
35, 003	Walcott, Halsey D., assignor to Horace Williams	Boston, Mass	Eyelet machines	April 15, 1862.
34, 470	Walcott, Jabez B., assignor to Wm. Hooper Blacker	Boston, Mass	Electro-plating iron and other metals with copper, process of.	Feb. 18, 1862.
36, 250	Waldby, Wm. H	Cooperstown, N. Y	Grain-cleaning machines	Aug. 19, 1862.
	Waldron, John M., and Theodore D. Davis. (*See* Davis & Waldron.)			
36, 043	Walker, C. F	Benford's Store, Pa	Rakes, horse	July 29, 1862.
35, 340	Walker, C. H	Warren, Mass	Chest of drawers	May 20, 1862.
34, 535	Walker, David	Newark, N. J	Cradle, self-rocking	Feb. 25, 1862.
34, 339	Walker, George W., assignor to himself and John Magee	Boston, Mass	Broilers, steak	Feb. 4, 1862.
34, 536	Walker, George W	Boston, Mass	Grates, sliding	Feb. 25, 1862.
34, 796	Walker, George W	Boston, Mass	Stoves	Mar. 25, 1862.
35, 905	Walker, George W	Boston, Mass	Stoves, cooking	July 15, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
35, 962	Walker, George W	Boston, Mass	Stoves, cooking	July 22, 1862.
34, 537	Walker, J. H	Worcester, Mass	Leather, machine for pricking	Feb. 25, 1862.
36, 469	Walker, Joseph N	Cincinnati, Ohio	Car-brakes, railroad	Sept. 16, 1862.
35, 643	Walker, Sylvanus	Boston, Mass	Clothes-wringer	June 17, 1862.
	Wallace, Robert. (*See* Fournier, F. R., assignor.)			
	Walling, Wm. P., and Daniel C. Smith. (*See* Smith & Walling.)			
35, 793	Wallis, James M	Milton, Ia	Fences, portable	July 1, 1862.
36, 815	Wallis, James M., and W. C	Milton, Ia	Planters, corn, hand	Oct. 28, 1862.
36, 185	Walter, Henry, sr	Elizabeth City, N. J	Tobacco, machine for preparing	Aug. 12, 1862.
35, 189	Walter, Joseph P	Brooklyn, N. Y	Tanks, vacuum	May 6, 1862.
37, 186	Walters, Henry	Tamaqua, Pa	Engines, steam	Dec. 16, 1862.
34, 185	Walton, Allen, and John L. Kite, ass'rs to Allen Walton	Philadelphia, Pa	Gas, illuminating, process of manufacturing	Jan. 14, 1862.
34, 894	Walton, Allen	Philadelphia, Pa	Gases, apparatus for mixing	April 15, 1862.
36, 460	Walton, Allen	Philadelphia, Pa	Bung for oil casks	Sept. 16, 1862.
36, 542	Walton, William N	New York, N. Y	Bottles, attaching labels to	Sept. 23, 1862.
	Wanamaker, J. S., & Co. (*See* Acker, Abram, assignor.)			
35, 720	Wanzer, Charles	New York, N. Y	Roofing slate, cement for	June 24, 1862.
	Waples, Rufus. (*See* Plant, Pascal, assignor.)			
36, 797	Wappich, Maximilian	Sacramento, Cal	Rudders, spars, apparatus for shipping	Mar. 25, 1862.
	Warburton, W. F. (*See* Howson, Henry, assignor.)			
34, 536	Warburton, Wm. F	Philadelphia, Pa	Hats, military	Feb. 25, 1862.
36, 315	Warburton, Wm. F	Philadelphia, Pa	Caps, army and navy	Aug. 26, 1862.
1, 701	Warburton, Wm. F	Philadelphia, Pa	Hat, military (Design)	Dec. 16, 1862.
	Ward, Alfred. (*See* Mears, John H., assignor.)			
34, 079	Ward, Asahel F	Philadelphia, Pa	Telegraphing by colors	Jan. 7, 1862.
36, 660	Ward, James, assignor to himself and Isaac F. Hunnewell	Boston, Mass	Brick machines	Oct. 14, 1862.
	Ward, John, jr. (*See* Johnson, Josee, assignor.)			
	Ward, John, jr. (*See* Johnson, Josee, assignor.)			
36, 740	Ward, P. S	Melville, Ia	Bee-hives	Oct. 21, 1862.
34, 539	Warden, H. H	New York, N. Y	Ships' armor plates	Feb. 25, 1862.
37, 263	Warden, Wm. G., and Thomas K. Petty	Pittsburg, Pa	Stills, oil	Dec. 23, 1862.
	Warder & Child. (*See* Cochrane, William F., assignor.)			
	Warder & Child. (*See* Cochrane, William F., assignor.)			
	Warder & Child. (*See* Cochrane, William F., assignor.)			
	Warder & Child. (*See* Cochrane, William F., assignor.)			
	Warder & Child. (*See* Cochrane, William F., assignor.)			
	Warder & Child. (*See* Cochrane, William F., assignor.)			
	Warder & Child. (*See* Cochrane, William F., assignor.)			
	Warder & Child. (*See* Cochrane, William F., assignor.)			
34, 174	Wardwell, C. P. S	Lake Village, N. H	Planing machine	Jan. 14, 1862.
34, 709	Walker, Thomas	New York, N. Y	Bottle for aerated liquids	Mar. 18, 1862.
34, 916	Walker, Thomas	New York, N. Y	Ærating liquids, apparatus for	April 8, 1862.
36, 543	Warner, Asher	Cleveland, Ohio	Traps, animal	Sept. 23, 1862.

35, 963	Warner, Henry, and B. F. Palmer	Boston, Mass	Tents, ventilating windows for	July 22, 1862.
35, 794	Warren, Anson, and James W. Martin	Maquoketa, Iowa	Water elevators	July 1, 1862.
37, 187	Warren, David	Gettysburg, Pa	Harvesters	Dec. 16, 1862.
	Warren, H. F. (*See* Knowles, J. P., assignor.)			
	Warren, Otis. (*See* Allen, William H., assignor.)			
36, 741	Warren, Sylvester W	Brooklyn, N. Y	Detector, low-water	Oct. 21, 1862.
36, 491	Warren, William M	Watertown, Conn	Press, foot	Sept. 16, 1862.
36, 698	Washburn, George I	Worcester, Mass	Wire, &c., iron and steel, annealing	Oct. 7, 1862.
34, 453	Washburn, Oliver C	Philadelphia, Pa	Composition for making oil-cloth	Feb. 18, 1862.
35, 405	Washburn, Samuel M	Poughkeepsie, N. Y	Water elevators	May 27, 1862.
1, 654	Washburn, William L	Springfield, Mass	Burial case (Design)	Sept. 2, 1862.
34, 540	Wasserlah, Emanuel	Cincinnati, Ohio	Ovens, portable	Feb. 25, 1862.
34, 394	Waterbury, Milan	Pole, Ill	Car-coupling	Feb. 11, 1862.
35, 228	Waterman, L. E., assignor to himself and James S. Bangs	Chicago, Ill	Cultivators	May 13, 1862.
37, 019	Waterman, L. E	Chicago, Ill	Cultivators	Nov. 25, 1862.
36, 377	Waters, Charles H	Groton, Mass	Looms for weaving wire-cloth	Sept. 2, 1862.
36, 251	Watkins, James B	New Bedford, Mass	Awnings	Aug. 19, 1862.
	Watson, C., and O. D. Eckerson. (*See* Eckerson & Watson.)			
36, 544	Watson, Lewis	Canton, Mich	Sawing machines, wood	Sept. 23, 1862.
	Watts, William L. (*See* Wiltil, George L., assignor.)			
	Weed, Samuel M. (*See* Lyman, William, jr., assignor.)			
35, 888	Webb, J. Russell	Jackson, Mich	Saccharine juices, portable evaporator for	July 8, 1862.
	Webb, W. W., et al. (*See* Gill, Palmer & Webb.)			
36, 119	Weber, Adam	New York, N. Y	Gas retorts, setting	Aug. 5, 1862.
35, 749	Webster, James, assignor to John H. and Robert Porter	Birmingham, England	Gas, oxygen, manufacture of	June 24, 1862.
37, 118	Webster, Joel	Brooklyn, N. Y	Sad-iron	Dec. 9, 1862.
	Webster, Samuel, and Abner C. Ainger. (*See* Ainger & Webster.)			
36, 889	Webster, William	Morrisania, N. Y	Damper, fire-regulator	Aug. 19, 1862.
	Wedekind, Gustav. (*See* Reichmann, Christian, assignor.)			
35, 341	Wedekind, Gustav	Philadelphia, Pa	Gas-burners or lamps, shade-holders for	May 20, 1862.
	Weed, George M. (*See* Richardson, George W., assignor.)			
36, 742	Weed, James	Muscatine, Iowa	Tree and plant protector	Oct. 21, 1862.
35, 721	Weimer, Peter L	Lebanon, Pa	Shot and shells, forming moulds for	June 24, 1862.
35, 795	Weir, Robert	Philadelphia, Pa	Projectiles	July 1, 1862.
37, 251	Weir, William S., jr	Monmouth, Ill	Cultivators	Dec. 23, 1862.
	Weissenborn, Henry, and Jacob Jenkins. (*See* Jenkins & Weissenborn.)			
34, 454	Weisling, William	New York, N. Y	Stitch for button-holes	Feb. 18, 1862.
34, 081	Welch, Robert	Frankford, Pa	Sewing machines	Jan. 7, 1862.
34, 541	Weldy, John	Dayton, Ohio	Sawing wood, machine for	Feb. 25, 1862.
37, 207	Welham, Thomas	Nemaha county, Neb	Observatory, military	Dec. 16, 1862.
	Welling, Charles H. (*See* Callender & Northrup, assignors.)			
	Welling, Charles H. (*See* Callender & Northrup, assignors.)			
	Welling, Charles H. (*See* Callender, Mills L., assignor.)			
1, 318	Wells, Henry A., deceased, by Henry A. Burr, assignee, through mesne assignments	New York, N. Y	Hat-bodies, manufacturing (Reissue)	June 17, 1862.
37, 188	Wells, Thomas J	New York, N. Y	Sawing machine, self-feeding	Dec. 16, 1862.
35, 729	Welsted, W. H	Buffalo, N. Y	Skates	Oct. 21, 1862.
34, 617	Welsh, James A., assignor to self and R. McC. Davidson	Xenia, Ohio	Grain scouring and threshing machines, cylinder for	Mar. 4, 1862.
1, 580	Wennett, John R	New York, N. Y	Spoon (Design)	May 13, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
34,542	Werné, Anthony	Pittston, Pa	Vinegar by the quick process, apparatus for making	Feb. 25, 1862.
36,925	Wesson, Franklin	Worcester, Mass	Fire-arms, breech-loading	Nov. 11, 1862.
36,926	Wesson, Phineas D	Providence, R. I	Saccharine and other liquids, evaporators for	Nov. 11, 1862.
34,022	Westcott, Amos	Syracuse, N. Y	Churns	Jan. 7, 1862.
35,120	Westcott, Amos	Syracuse, N. Y	Churns	Jan. 7, 1862.
35,342	Westcott, Charles S	New York, N. Y	Letters without discovery, device to prevent opening	April 29, 1862.
34,083	Westcott, H. P	Seneca Falls, N. Y	Panelling machines	May 20, 1862.
34,605	Westinghouse, George	Schenectady, N. Y	Winnowers, grain and seed	Jan. 7, 1862.
1,306	Westinghouse, George	Schenectady, N. Y	Winnowers, grain and seed	Mar. 4, 1862.
37,189	Westlake, James V	St. Louis, Mo	Punching counter-sunk holes, mode of (Reissue)	Dec. 16, 1862.
36,044	Westlake, William	Milwaukie, Wis	Heaters for railroad cars	Dec. 16, 1862.
36,063	Westlake, William, assignor to self and Charles L. Rice	Milwaukie, Wis	Ventilators for railroad cars	July 29, 1862.
	Wethered, T. W., *et al.* (*See* Shannon, Alexander, assignor.)			July 29, 1862.
	Wetmore, A. R., *et al.* (*See* Quann, William, assignor.)			
35,796	Weymouth, A. L	Boston, Mass	Bit for taming horses	July 1, 1862.
35,039	Whalen, James A	Brooklyn, N. Y	Fire-arms, revolving	April 22, 1862.
37,190	Wharton, Joseph	Philadelphia, Pa	Furnaces for the manufacture of oxide of zinc	Dec. 16, 1862.
35,797	Wheat, Jesse S	Wheeling, Va	Tanning vat	July 1, 1862.
34,853	Wheat, Joseph S	Berkeley Springs, Va	Tanning, apparatus for	April 1, 1862.
	Wheeler & Wilson Manufacturing Company. (*See* McCurdy, James S., assignor.)			
36,874	Wheeler, Asahel	Newton, Mass	Varnish, copal	Nov. 4, 1862.
35,271	Wheeler, Jesse B	Bolton, Mass	Grain, stirring, conveying, and cooling	May 13, 1862.
34,398	Wheeler, John W., assignor to Henry H. Wheeler	Cleveland, Ohio	Water elevators	Feb. 11, 1862.
34,471	Wheeler, Norman W., assignor to Simon Stevens	Brooklyn, N. Y	Engines, tractomotive	Feb. 18, 1862.
1,023	Wheeler, Russel, and Stephen A. Bailey	Utica, N. Y	Stove (Design)	Aug. 5, 1862.
36,378	Wheeler, Seth	Albany, N. Y	Horse powers, links for	Sept. 2, 1862.
36,045	Wheeler, T. Northrup	Rio, Wis	Registers, grain	July 29, 1862.
35,555	Wheelock, Charles A	Uxbridge, Mass	Steam-trap	June 10, 1862.
36,379	Wheelock, Salem A	Charlton, Mass	Churns	Sept. 2, 1862.
	Whelpley, James D., and J. J. Storer. (*See* Storer & Whelpley.)			
34,606	Whipple, C., and R. G. Stafford	Providence, R. I	Cotton, machines for combing	Mar. 4, 1862.
34,865	Whipple, Milton D., assignor to the Whipple File Manufacturing Company.	Cambridge, Mass	Files, machines for cutting	April 1, 1862.
34,866	Whipple, Milton D., assignor to the Whipple File Manufacturing Company.	Cambridge, Mass	Files	April 1, 1862.
36,581	Whipple, Milton D	Cambridge, Mass	Air-engines, hot	Sept. 30, 1862.
	Whipple, Jonathan E. (*See* Hutchison, James, assignor.)			
36,875	Whitaker, James	Philadelphia, Pa	Looms, power, take-up motion for	Nov. 4, 1862.
35,004	Whitcomb, James O., assignor to Joseph Dodin	Brooklyn, N. Y	Sewing-needle cases	April 15, 1862.
35,481	Whitcomb, Lewis J., and William E. Prall	Mainville, Ohio	Saccharine juices, apparatus for evaporating	June 3, 1862.
	White, A. B., and J. W. Barton. (*See* Barton, Elijah, assignor.)			
35,798	White, Adoniram J	East Foxborough, Mass	Scythe-snaths, nibs for	July 1, 1862.
35,272	White, E. J	Locke, N. Y	Ploughs	May 13, 1862.
34,395	White, George W	New York, N. Y	Fire-arms, breech-loading	Feb. 4, 1862.
	White, Isaac W. (*See* Hull, Stephen, assignor.)			
35,482	White, Jonathan	Antrim, N. H	Apple-parer	June 3, 1862.
36,380	White, Joseph, and Angus Agnew	Philadelphia, Pa	Lamps, coal-oil	Sept. 2, 1862.
37,119	White, Lamer C	Waterbury, Conn	Lamp chimneys, fastenings for	Dec. 9, 1862.
34,618	White, Nelson B., assignor to self and Wm. R. Rhoads	South Dedham, Mass	Clothes-wringer	Mar. 4, 1862.
34,223	White, Samuel S	Philadelphia, Pa	Teeth, artificial, manufacture of	Jan. 21, 1862.
	White, S. S. (*See* Smith, Francis W., assignor.)			
1,305	White, Samuel S	Philadelphia, Pa	Teeth, artificial, manufacture of (Reissue)	April 29, 1862.
35,733	White, Thomas E. M	New Bedford, Mass	Legs, artificial	June 24, 1862.
34,543	White, Wells H	Dubuque, Iowa	Roofing	Feb. 25, 1862.
36,120	White, Wells H	Dubuque, Iowa	Cane, sugar, sorghum, &c., cutters for	Aug. 5, 1862.
35,188	White, William H	Woodbury, Conn	Sheep-shears	May 6, 1862.
34,278	Whitehill, John S	Westchester, Pa	Wagons, running gear of	Jan. 28, 1862.
36,598	Whiteside, James K	Rising Sun, Md	Washing machine	Sept. 30, 1862.
	Whiting, A. J., *et al.* (*See* Fairchild, L. S., assignor.)			
35,406	Whiting, James M	Providence, R. I	Screws, wood, machines for threading	May 27, 1862.
35,906	Whiting, James M	Providence, R. I	Screws, wood, machines for shaving and nicking the heads of	July 15, 1862.
	Whitker, Daniel D. (*See* Merritt, Chester, assignor.)			
36,497	Whitmarsh, Henry M., assignor to self and James O. and Eleazer D. Nash	Abington, Mass	Boots, gaiter, fastening for	Sept. 16, 1862.
	Whitney, Asa	Philadelphia, Pa	Wheels, car, cast-iron, annealing and cooling (Extension)	April 7, 1862.
	Whitney, B. D., and J. G. Folsom. (*See* Folsom & Whitney. Design.)			
36,594	Whitney, Daniel W	New York, N. Y	Button holes, apparatus for piercing cloth for	Sept. 30, 1862.
35,852	Whitney, James A	Maryland, Ohio	Harvesters	July 8, 1862.
36,439	Whitney, L. F	Charlestown, Mass	Rails for street railroads	Sept. 9, 1862.
	Whitney, Orrill, *et al.* (*See* Peck, Royal H., assignor.)			
35,121	Whittemore, D. H	Worcester, Mass	Straw-cutters	April 29, 1862.
35,343	Whittemore, Jonathan R	Chicopee Falls, Mass	Harvesters, rakes for	May 20, 1862.
35,316	Whittemore, Jonathan R	Chicopee Falls, Mass	Hay and feed cutters	Aug. 26, 1862.
36,743	Whittemore, Joshua	South Reading, Mass	Crutches	Oct. 21, 1862.
	Whitworth, Thomas Schofield, and James Higgins. (*See* Higgins & Whitworth.)			
37,191	Wiarda, John	Hoboken, N. J	Sled, propeller, rocking	Dec. 16, 1862.
35,556	Wible, E. A	Georgetown, Cal	Preserving grapes and other fruit	June 10, 1862.
34,279	Wicken, William	Muscoda, Wis	Separators, grain	Jan. 28, 1862.
34,798	Wickersham, M. S	Philadelphia, Pa	Shells, explosive, for ordnance	Mar. 25, 1862.
30,816	Wiesecke, Henry F	New York, N. Y	Medicines, sugar tablets for containing	Oct. 28, 1862.
36,629	Wiggan, George B., and J. W. Hoard	Providence, R. I	Nail machines	Oct. 7, 1862.
35,794	Wilcox, Dutee	Providence, R. I	Sleeve-fasteners	June 24, 1862.
	Wilcox, James. (*See* Ensign, William F., assignor.)			
	Wilcox, Jedediah. (*See* Baird, Joseph H., assignor.)			
34,455	Wilcox, John W	West Roxbury, Mass	Boilers, steam-vats, tanks, &c., mode of preventing corrosion of	Feb. 18, 1862.
34,927	Wilcox, John W., assignor to Edward H. Ensign, Erastus C. Bridgman, and Thomas C. Fanning.	New York, N. Y	Envelopes	April 8, 1862.
	Wilcox, W. S. (*See* Bate, R. L., assignor.)			
37,120	Wilcox, William J	New York, N. Y	Lard, apparatus for cooling	Dec. 9, 1862.

List of patentees, of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
36,186	Wilde, Henry	Newark, N. J	Chamfering and crozing machine	Aug. 12, 1862.
36,927	Wilde, Robert T., and Samuel H. Lyon	Brooklyn, N. Y	Hat, disc fig forming	Nov. 11, 1862.
	Wilder, Charles. (*See* Lakin, Taylor D., assignor.)			
	Wilder, J. C., *et al.* (*See* Thompson, Roswell, assignor.)			
36,744	Wilder, Moses G	West Meriden, Conn	Metals, machines for milling and cutting	Oct. 21, 1862.
36,710	Wilder, R. A	Cremona, Pa	Hoisting machines	Mar. 18, 1862.
35,168	Wilkens, A. G	Cooperstown, Pa	Washing machines	May 6, 1862.
36,591	Wilkens, John M	Chicago, Ill	Sewing machines	Sept. 30, 1862.
34,456	Willard, Hosea	Vergennes, Vt	Clothes bar	Feb. 18, 1862.
35,344	Willard, Hosea	Vergennes, Vt	Looking-glass	May 20, 1862.
36,573	Willard, William H., assignor to Sarah E. Willard	Cleveland, Ohio	Propellers relatively to the draught of water, apparatus for adjusting.	June 10, 1862.
36,381	Willard, W. H	Cleveland, Ohio	Boots	Sept. 2, 1862.
36,469	Willard, W. H	Cleveland, Ohio	Propeller, marine	Sept. 16, 1862.
37,065	Willard, W. H	Cleveland, Ohio	Coulter, extension, revolving, and gauge-wheel combined	Dec. 2, 1862.
36,795	Willcox, Fenn	Newark, N. J	Sewing machines, gig	June 24, 1862.
	Williams & Co. (*See* Matthews, William H., assignor.)			
	Williams, Addison G., and Mortimer C. Cogswell. (*See* Cogswell & Williams.)			
34,838	Williams, C. W	Boston, Mass	Sewing machines	April 8, 1862.
34,175	Williams, Dyer	Syracuse, N. Y	Axles, locomotive	Jan. 14, 1862.
35,053	Williams, Dyer, assignor to self and Horace C. Silsby	Syracuse, N. Y	Fire-engines on locomotives	April 22, 1862.
35,273	Williams, Elijah D	Philadelphia, Pa	Ordnance and other fire-arms, wad for	May 13, 1862.
37,145	Williams, Elijah D	Philadelphia, Pa	Bullet, elongated	Dec. 9, 1862.
35,005	Williams, E. H., and D. R. W. Williams, assignors to E. H. Williams.	Clearmont, Iowa	Excavating, ploughing, and grading machines	April 15, 1862.
	Williams, E. H. (*See* Moss, James M., assignor.)			
36,046	Williams, Henry	Chicago, Ill	Harvesters, corn	July 29, 1862.
	Williams, Horace. (*See* Walcott, Halsey D., assignor.)			
35,128	Williams, Irwin A	Utica, N. Y	Lamps, locomotive	April 29, 1862.
34,365	Williams, Isaac S	Philadelphia, Pa	Stoves, camp	Feb. 11, 1862.
1,516	Williams, James, assignor to L. M. Williams & Co	Philadelphia, Pa	Trade mark (Design)	Jan. 7, 1862.
35,644	Williams, Job T	Philadelphia, Pa	Lamp reflectors	June 17, 1862.
37,080	Williams, Loring W	Nevada, Cal	Crusher, quartz	Nov. 25, 1862.
35,980	Williams, N. W., assignor to self and Owen M. Smith,	Frankford, Pa	Lamp burner	July 8, 1862.
36,545	Williams, Samuel B	Barnesville, Ohio	Smut machines	Sept. 23, 1862.
36,263	Williams, Turner, assignor to self and David Heaton, 2d	Providence, R. I	Cranks for driving sewing machines and other machinery	Aug. 19, 1862.
36,746	Williamson, John H., and Samuel Forsythe	Seabeck, W. T	Sewing machines	Oct. 21, 1862.
36,749	Williamson, John H., and Samuel Forsythe	Seabeck, W. T	Saw gear	Oct. 21, 1862.
	Willimantic Linen Company. (*See* Conant, Hezekiah, ass'or)			
37,021	Williston, John	Vallejo, Cal	Hose couplings	Nov. 25, 1862.
34,799	Wilson, Abel	Frankford, Pa	Soldering iron	Mar. 25, 1862.
34,800	Wilson, Allen B	Waterbury, Conn	Cameras, photographic	Mar. 25, 1862.
37,252	Wilson, Allen B	Waterbury, Conn	Photographic plate holder	Dec. 23, 1862.
36,694	Wilson, David C	Painesville, Ohio	Press board holders, tailors'	Oct. 14, 1862.
35,345	Wilson, Edward O	Peekskill, N. Y	Stair rod holder	May 20, 1862.
35,861	Wilson, Edward L., assignor to Charles H. Morgan	Philadelphia, Pa	Envelope, picture	July 8, 1862.
36,975	Wilson, George W	Galesburg, Ill	Mill spindles, mode of tightening followers to	Nov. 18, 1862.
37,121	Wilson, F. R	Auburn, Cal	Tires, machines for upsetting	Dec. 9, 1862.
36,199	Wilson, James G., assignor to C. P. Dixon and Edward Larned.	New York, N. Y	Knitting machines	Aug. 12, 1862.
35,645	Wilson, John E	Baltimore, Md	Liquids, apparatus for defecating	June 17, 1862.
35,650	Wilson, Joseph B., deceased, by Charles Heath and Joseph Wilson Adams.	Malden, Mass	Brick, machinery for pressing	June 17, 1862.
34,366	Wilson, R. P	Cleveland, Ohio	Washing machine	Feb. 11, 1862.
35,726	Wilson, R. P	New York, N. Y	Clothes-wringer	June 24, 1862.
34,544	Wilson, Theodore	Silver Creek, Ill	Cars, railroad, running gear of	Feb. 25, 1862.
34,178	Wilson, W. W	Collins Station, Ill	Planters, corn	Jan. 14, 1862.
	Wimmet, Daniel D. (*See* McKinney, John M., assignor.)			
35,223	Wing, Stephen M., assignor to Lindly M. Wing	Sandwich, Mass	Wringing machines, rollers for	May 13, 1862.
35,191	Winskell, Y. B	Chicago, Ill	Sewing machines	May 6, 1862.
34,728	Winkner, Marcus A	North San Juan, Cal	Hose couplings	Sept. 9, 1862.
34,269	Winslow, Isaac, assignor to John W. Jones	Philadelphia, Pa	Corn, Indian, preserved green	April 8, 1862.
35,274	Winslow, Isaac, assignor to John W. Jones	Philadelphia, Pa	Preserving green corn	May 13, 1862.
35,346	Winslow, Isaac, assignor to John W. Jones	Philadelphia, Pa	Preserving green corn, process of	May 20, 1862.
35,352	Winslow, Isaac, assignor to John W. Jones	Philadelphia, Pa	Preserving vegetables in hermetically sealed cans	May 20, 1862.
34,177	Winslow, John F	Troy, N. Y	Paddle balls, machine for compressing	Jan. 14, 1862.
35,407	Winslow, John F	Troy, N. Y	Vessels, armor plates for	May 27, 1862.
35,153	Winslow, Lorenzo	Rochester, N. Y	Wrench	April 29, 1862.
37,088	Winslow, Lorenzo	Rochester, N. Y	Bits or augers in their stocks or handles, method of fastening.	Nov. 25, 1862.
36,121	Wise, Barnard	Cincinnati, Ohio	Ice, handling and shipping	Aug. 5, 1862.
35,994	Wisner, T. W	Oceola, Mich	Marker, ready	July 29, 1862.
36,977	Wisner, T. W	Oceola, Mich	Squares, trying	Nov. 18, 1862.
36,317	Wister, Jacob	Germantown, Pa	Bolts, floor	Aug. 26, 1862.
	Withers, Warren A., *et al.* (*See* Prall, Wm. R., assignor.)			
34,240	Witall, George L., assignor to self and Levi L. Hosher	Philadelphia, Pa	Washing machine	Feb. 4, 1862.
35,158	Witall, George L	Philadelphia, Pa	Grater, nutmeg	May 6, 1862.
35,633	Witall, George L., assignor to self and Thomas Cochran	Philadelphia, Pa	Stirring and mixing, apparatus for	Oct. 7, 1862.
35,788	Witall, George L., assignor to self and William L. Wattis	Philadelphia, Pa	Lamps, coal-oil	Oct. 21, 1862.
35,128	Wolf, Lorenz	St. Louis, Mo	Ploughs	Aug. 5, 1862.
36,567	Wolfe, Gordon G	Troy, N. Y	Stoves	June 10, 1862.
	Wolowski, Alexander, *et al.* (*See* Brecht & Sigesmond.)			
36,187	Wood, Emerson	Monson, Mass	Carpet-stretcher	Aug. 12, 1862.
	Wood, J. M., and M. Easterbrook. (*See* Easterbrook & Wood.)			
	Wood, J. M., and M. Easterbrook. (*See* Easterbrook & Wood. Reissue.)			
34,854	Wood, S. W	Cornwall, N. Y	Fire-arms breech-loading	April 1, 1862.
36,984	Wood, S. W	Cornwall, N. Y	Fire-arms, revolving	Nov. 18, 1862.
1,513	Wood, Thomas H., Henry S. Hubbell, and Alfred S. Hubbell.	Utica, N. Y	Stove (Design)	Jan. 7, 1862.
1,514	Wood, Thomas H., Henry S. Hubbell, and Alfred S. Hubbell.	Utica, N. Y	Stove, cook's (Design)	Jan. 7, 1862.
1,515	Wood, Thomas H., Henry S. Hubbell, and Alfred S. Hubbell.	Utica, N. Y	Stove, cook's (Design)	Jan. 7, 1862.

List of patentees of inventions, designs, and reissues, 1862.

No.	Name.	Residence.	Invention or discovery.	Date.
34,993	Wood, Walter A.	Hoosick Falls, N. Y.	Harvesters	April 15, 1862.
35,556	Wood, Walter A.	Hoosick Falls, N. Y.	Harvesters	June 10, 1862.
36,047	Wood, Walter A.	Hoosick Falls, N. Y.	Harvesting machines	July 29, 1862.
37,066	Wood, W. A.	Hoosick Falls, N. Y.	Harvesters, cutting apparatus for	Dec. 2, 1862.
36,767	Wood, William H.	Hudson, N. J.	Piers and bridges	Oct. 21, 1862.
	Wood, William W. W., and H. D. Stover. (*See* Stover & Wood.)			
	Wood, William W. W. (*See* Baron Victor, assignor.)			
36,546	Wood, William W. W.	Philadelphia, Pa.	Ships and other batteries, defensive armor for	Sept. 23, 1862.
34,457	Woodbury, S. D.	Lynn, Mass.	Stoves, camp	Feb. 18, 1862.
35,193	Woodbury, Joseph P.	West Roxbury, Mass.	Vessels, war, arming	May 6, 1862.
35,963	Woodbury, Joseph P., and Sal. S. Gray	West Roxbury, Mass.	Projectiles, feathered, sabot for	July 29, 1862.
36,998	Woodcock, James M.	Bridgeport, Ohio	Rakes, horse	Nov. 11, 1862.
1,547	Woodruff, Isaac B.	Winchester, Conn.	Clock case (Design)	Feb. 25, 1862.
35,912	Woodruff, Lucius, assignor to Russell & Erwin, manufacturing company.	New Briton, Conn.	Locks	July 15, 1862.
	Woods, Edward P. (*See* Sherwood, Daniel, assignor.)			
36,756	Woods, George, assignor to Mason & Hamlin	Boston, Mass.	Musical instruments, operating swells in	Oct. 21, 1862.
36,200	Woods, W. L., assignor to Harriet Woods	Washington, D. C.	Paper file	Aug. 19, 1862.
36,966	Woodward, Calvin and George M.	New York, N. Y.	Pumps, steam	July 22, 1862.
34,801	Woodward, Edward F.	Brooklyn, N. Y.	Coffee boilers	Mar. 25, 1862.
36,198	Woodward, Edward F.	Charlestown, Mass.	Cans for oils, varnishes, &c.	Aug. 12, 1862.
34,084	Woodward, F. G.	Worcester, Mass.	Fire-arms, breech-loading	Jan. 7, 1862.
36,817	Woodward, John	Wilmot, N. H.	Gates	Oct. 28, 1862.
35,804	Woodworth, Arad, third, assignor to self, Albert Bridges, and Joel C. Lane.	New York, N. Y.	Tubes, smoking	July 1, 1862.
36,318	Woodworth, George W.	Cleveland, Ohio	Water elevators	Aug. 26, 1862.
37,023	Woolley, G. W.	New York, N. Y.	Forceps, tubular	Nov. 25, 1862.
36,434	Woolsey, James W.	Niles, Mich.	Diggers, potato	Sept. 9, 1862.
34,658	Woolson, Charles J.	Cleveland, Ohio	Stoves, cooking	Mar. 11, 1862.
1,581	Woolson, Charles J.	Cleveland, Ohio	Stoves, cook (Design)	May 13, 1862.
35,483	Woolson, Charles J.	Cleveland, Ohio	Stoves, cooking	June 3, 1862.
	Woolston, Benjamin L. (*See* Firth, Thos. T., assignor.)			
36,745	Woolston, Samuel	Vincenttown, N. J.	Camels, marine	Oct. 21, 1862.
34,367	Wooster, Benjamin W.	Albany, N. Y.	Coffins, handles for	Feb. 11, 1862.
35,484	Worcester, Horatio	New York, N. Y.	Pianos, iron frames of	June 3, 1862.
36,999	Workman, William	Pipon, Wis.	Seeding machines, broadcast	Nov. 11, 1862.
	Worman, L. H. (*See* Ulmer, Philip, assignor.)			
	Worman, L. H. (*See* Ulmer, Philip, assignor.)			
36,547	Worth, Guy C.	Upper Sandusky, Ohio	Locks	Sept. 23, 1862.
36,930	Worth, Guy C.	Upper Sandusky, Ohio	Rein guard for horses	Nov. 11, 1862.
34,294	Worthen, William E.	New York, N. Y.	Metal, sheet, architectural	Jan. 21, 1862.
35,064	Worthen, William E.	New York, N. Y.	Faucet	April 22, 1862.
35,425	Worthing, John P., assignor to Nelson Orcutt and George W. Gregory	Binghampton, N. Y.	Paddle-wheels, arrangement of feathering floats with	May 27, 1862.

34,659	Wright, Charles	New York, N. Y.	Tool posts or holders	Mar. 11, 1862.
	Wright, Ed. S., and H. D. Stover. (*See* Stover & Wright.)			
	Wright, Joseph S. (*See* Lambert, Thomas S., assignor.)			
	Wright, Luther S., and Demas L. Grover. (*See* Grover & Wright.)			
37,122	Wright, William W.	Killingly, Conn.	Shoe knife	Dec. 9, 1862.
34,711	Wyeth, H. M.	Pulaski, Iowa	Pumps	Mar. 18, 1862.
37,024	Wyeth, H. M.	Bloomfield, Iowa	Pumps	Nov. 25, 1862.
	Yale & Curtis. (*See* Treat, J. Lawson, assignor.)			
	Yale, Henry. (*See* Curtis, Stephen, jr., assignor.)			
36,876	Yapp, William	Cleveland, Ohio	Buildings, mode of sustaining gutters to	Nov. 4, 1862.
34,338	Yeakel, David T.	Lafayette, Ind.	Ordnance, breech-loading	Feb. 11, 1862.
35,124	Yeakel, David T.	Lafayette, Ind.	Ordnance, mode of constructing	April 29, 1862.
35,907	Yielding, Richard	Ypsilanti, Mich.	Harvesters, corn	July 15, 1862.
36,253	Young, Alexander K.	Boston, Mass.	Band and skirt hoop attachments	Aug. 19, 1862.
35,194	Young, Alonzo E.	Dorchester, Mass.	Lantern, reflecting	May 6, 1862.
35,799	Young, Alonzo E.	Dorchester, Mass.	Casters, table, glass	July 1, 1862.
35,195	Young, Erastus	Penatequit, N. Y.	Washing machine	May 6, 1862.
	Young, John	West Galway, N. Y.	Washing machines (Extension)	Sept. 4, 1862.
36,818	Young, J. G., jr.	Auburn, Maine	Boot and shoe stretcher	Oct. 28, 1862.
34,663	Young, Thomas J., assignor to self and John Elder	Philadelphia, Pa.	Counting machines	Mar. 11, 1862.
34,607	Zell, George M.	Waynesville, Ohio	Water-elevators	Mar. 4, 1862.
36,131	Zettle, William, assignor to self and John H. Stalls	Cincinnati, Ohio	Jar for provisions, &c.	Aug. 5, 1862.
35,646	Zimmerman, John	Bloomfield, Pa.	Jacks, lifting	June 17, 1862.
35,485	Zug, David	Shafferstown, Pa.	Harvesters	June 3, 1862.
36,435	Zurn, Benjamin	New York, N. Y.	Sawing machine adapted for the use of the auger and chisel	Sept. 9, 1862.

DESCRIPTIONS AND CLAIMS OF PATENTS.

ISSUED IN THE YEAR 1863

ILLUSTRATED WITH ENGRAVINGS.

No. 34,045.—CHARLES ALEXANDER, of Washington, D. C.—*Improvement in Camp Candlestick.*—Patent dated January 7, 1863.—This invention consists in inserting a socket in the bottom of a common drinking cup, so as to hold a candle when the cup is inverted.

Claim.—The described combined cup and candlestick, as an article of manufacture, the same being constructed as and for the purpose set forth.

No. 34,046.—STEPHEN J. BABBITT, of Hackettstown, N. J.—*Improvement in Washboards for Washing Clothes.*—Patent dated January 7, 1863.—This invention consists in combining with the washboard a rubber, so constructed and arranged as to obviate the necessity of direct application of the hands, at the same time admitting of the washboard being used in the ordinary way.

Claim.—The washboard A, provided with a rubbing piece *a*, corrugated or fluted at both sides, and fitted between the stiles or side pieces *b b*, as shown in combination with the rubber B, applied to the washboard, and provided with knobs or semi-spherical projections *d*, as and for the purpose set forth.

No. 34,047.—H. W. BALL, of New York, N. Y.—*Improved Combination of Table and Camp Chest.*—Patent dated January 7, 1863.—A table and camp chest are so combined that the table, when not in use, may be folded up and enclosed within the lid of the chest, without interfering with the articles within the chest, and also be taken out from the lid, unfolded and adjusted, without interfering with other articles in the chest.

Claim.—The arrangement and construction of the hooks *d*, sockets *e*, detachable legs D, and hooks E, with each other and with the divided table top C, and camp chest A, so as to operate together as set forth.

No. 34,048.—S. G. BLACKMAN, of Waterbury, Conn.—*Improvement in Lamps.*—Patent dated January 7, 1863.—The object of the invention is to obtain or render available for illumination all the light emitted by the flame below the apex of the cone or deflector.

Claim.—As an improved article of manufacture, a cone or deflector for lamp tops, composed of metal and mica or other suitable transparent substance, substantially as described.

No. 34,049.—G. W. BONHAM, of Henry, Ill.—*Improvement in Pulverizers and Seeding Machines.*—Patent dated January 7 1863.—The object of this invention is to sow seed and pulverise the earth at one operation; and it consists of a seed hopper with arrangements for gearing and adjustment, and a series of pulverisers or clod-breakers worked by eccentrics or cranks in combination with vibrating levers, to be geared and adjusted at the will of the driver of the machine.

Claim.—First, the pulverisers *v*, arranged on the shaft *d*, in respect to each other, when constructed and operating in the manner and for the purpose specified.

Second, arranging the seed box *c*, in the frame *a*, on pivots *k*, so that the driver can throw the feeder in and out of gear by the screw *l*, arranged at the side of his seat, as set forth.

Third, attaching the front truck to the front part of the frame *a*, and arranging it in relation thereto, so that the dip of the pulverisers can be regulated by the screw *g* and handle *h*, in front of the driver's seat, as set forth.

No. 34,050.—P. W. BURNETT, of Sacramento, Cal.—*Improved Railroad Switch.*—Patent dated January 7, 1863.—The switch is actuated by the engine or by an appendage thereto.

Claim.—The arrangement of the pivoted bevelled levers M M G G, and grooved levers H H, with the pendants J, shafts I I L L, rods *b b c c*, lever K, shafts E, cam D', and switch rails B B, as shown and described.

The arrangement of the slotted adjustable pendants N, with the curved arms *e*† *d*†, pins *f*†, shoulders *e*†, and shafts *b*°, as shown and described.

No. 34,051.—ANDREW D. CAMPBELL & ELBERT PERCE, of New York, N. Y.—*Improvement in Casks for holding Quicksilver, Petroleum, or Hydro-carbon Fluids.*—Patent dated January 7, 1862.—The claims fully set forth the nature and object of the invention.

Claim.—First, the use and application of any compound containing silica to impregnate the pores and crevices of wood or other porous or fibrous materials, suitable for the construction of barrels or vessels for holding quicksilver, petroleum, or hydro-carbon fluids, and to fill the joints of said barrels or vessels, in combination with a lining of cloth, paper, or other suitable fabric, glued to the interior of barrels or vessels, and coated with any compound containing silica, to render them impervious to the penetrating action of quicksilver, petroleum, or hydro-carbon fluids, in the manner above set forth.

Second, specifically the impregnation of wood, or other materials suitable for the construction of barrels or vessels for holding quicksilver, petroleum, and hydro-carbon fluids, either before or after such vessels or barrels are made, with any solution containing silica, by means of heat and pressure, for the purpose set forth.

Third, specifically the application of a lining of cloth, paper, or other suitable fabric, glued to the interior of barrels or vessels for holding quicksilver, petroleum, or hydro-carbon fluids, and coated with any solution containing silica, for the purpose set forth.

No. 34,052.—GEORGE D. DENISON, of Troy, Ohio.—*Improved Grain Register.*—Patent dated January 7, 1862.—This device is designed to be attached to a threshing or other similar machine for counting and registering the number of bushels or measures of grain as it issues from the machine.

Claim.—The combination of the box A, skids B B′, worm shaft G, arms *h*, wheel E, index *e*, and dial I, constructed, arranged, and operating substantially as shown and explained, and for the purpose specified.

No. 34,053.—D. A. FISKE, of Milwaukee, Wisconsin.—*Improvement in Vapor Lamps.*—Patent dated January 7, 1862.—The object of this invention is to increase the amount of gas and flame by means of a bundle of wires passing through the tube containing the liquid, and also to increase the facility for attaching and detaching the globe.

Claim.—The arrangement of the removable cap G, and the bundle of wires H, filling the tube of said cap in combination with the cup R; also, the manner of supporting the globe M by means of the stem O and the socket L, in combination with the method of attaching and detaching the globe-supporter W by means of the screw P, substantially in the manner as and for the purposes described.

No. 34,054.—M. P. GARDNER, of Huntington county, Ind.—*Improvement in Mill-stone Dressing.*—Patent dated January 7, 1862.—The invention consists in providing a rule whereby the lines of dressing on the bed-stone and runner may be cut parallel to each other, so as to perfectly coincide, for the purpose of cutting the grain in all parts alike.

Claim.—The construction and use of the rule, as described and seen in Fig. 3 of drawings, to determine and mark out for cutting parallel lines of dress, so that in running they may perfectly coincide one with the other, so as to run more steadily and cut the grain evenly and uniformly.

No. 34,055.—JAMES E. GILLESPIE, of Trenton, N. J.—*Improved Hydraulic Governor.*—Patent dated January 7, 1862.—The object of this invention is to regulate the speed of engines by means of a perforated cylinder containing a piston, which operates a zig-zag lever, and is placed within a reservoir connected with a rotary pump, which imparts power to the mechanism operating the aforesaid lever; water or other fluid being used as a medium of transmitting the action of the pump to the piston.

Claim.—The use of a rotary pump F G H, in combination with a perforated cylinder M N, and piston P, for the purpose of regulating the speed of engines, substantially as above described and for the purpose set forth.

Also, the use of the reciprocating zig-zag bar 2 3 4 5, in combination with the eccentric X, and the piston P, substantially as described and for the purposes set forth.

No. 34,056.—EDWIN GOMEZ, of New York, N. Y.—*Improvement in Firing Cannon, Mortars, &c., by an attached Fusee.*—Patent dated January 7, 1862.—The invention relates to a mode of applying a fusee to the touch-hole of a cannon, mortar, or other gun, so as to fire one or several cannon at exactly the desired time.

Claim.—The perforated fusee, clamped to the cannon, mortar, or similar article, at the touch-hole, for the purposes substantially as set forth.

No. 34,057.—EDWIN GOMEZ, of New York, N. Y.—*Improvement in the Construction of Trains or Fuses.*—Patent dated January 7, 1862.—The invention consists in constructing a safety fuse or train in the form of a flattened strip or tape; and in the manner of strengthening and protecting the tape fusee by the introduction of longitudinal strings or cords, and a binding surrounding the same to keep the fusee and cords together, a thin coating of gutta-percha being applied to render the fusee water-proof.

Claim.—First, a flat or tape fusee formed of an explosive compound enclosed in a strip of folded paper, protected by a winding of string or an envelope of gutta-percha or other suitable material.

Second, the longitudinal strings or cords *d d*, in combination with the said flattened or tape fusee, in the manner and for the purposes specified.

Third, the manner set forth of uniting lengths or sections of tape fusee by the notching or lapping, as specified.

No. 34,058.—B. B. HOTCHKISS, of Sharon, Conn.—*Improvement in Canister Shot for Ordnance.*—Patent dated January 7, 1862.—The invention consists in the employment of an inner case of metal or other suitable material, divided longitudinally in one or more places for the purpose of contributing to the resistance of the case to outside pressure, thus diminishing the liability of the canister to become bruised or distorted in form, while the strength of the structure opposed to bursting strains is but little, if any, greater than that one to the outer case alone. It also consists in the employment of a box attached to the soft-metal base, so as to be capable of folding within a recess in said base for convenience of transportation, and being unfolded for receiving the powder when wanted for use.

Claim.—First, the employment of the inner case C, divided longitudinally, substantially as and for the purpose described.

Second, the attaching of a bag H to the base B, so as to be capable of folding within the recess therein, and of being unfolded when wanted for use, substantially as shown.

No. 34,059.—W. W. HUBBELL, of Philadelphia, Pa.—*Improvement in Explosive Shells for Ordnance.*—Patent dated January 7, 1862.—This invention embraces a number of devices as set forth in the claims, which do not admit of brief description.

Claim.—First, the vent 15, opposite and nearly or quite at right angles to the base of the chamber 4, to receive and discharge the fire as quick as possible, and deliver the water direct on the base of the chamber to diffuse it in the best manner, as described.

Second, expanding the fire in an enlarged chamber around the mouth of the burning column, so as to secure a large body of fire to insure the explosion of the shell, as described.

Third, combining the percussion exploder with the burning fuse, by securing the cylinder F to the inner end of the fuse stock, and providing it with the head for the striking inside of the cylinder, so as to unite the percussion and the fuse principles for explosion, as described.

Fourth, the lead stopper *r*, inserted in and secured to the inner end of the fuse stock by screw threads or similar means, as and for the purpose described; and also forming the chamber or space *t*, between this stopper and the burning column, as described.

Fifth, the chamber *q*, and its opening *p*, between the head M and the fuse column, as described.

Sixth, the lead or metallic stopper *z z*, in the metal base, or groove covering the holes *z*, and releasing on concussion to explode the projectile, as described.

Seventh, the fire-chambered water-capping combined with the cylindrical fuse-opening or stock, carrying the burning column with cylinder opening at the inner end, to hold the fire and explode the shell on impact, as described.

Eighth, the adjustable metallic timing rod W, in the burning column, or near its side, to adjust the fuse to explode the projectile at any instant of time, as described. Also, the strand of quick match *s*, in its lower end, to raise and lead the fire down on time, as described.

Ninth, the fire chamber 4, in the capping between the water table or plate 2 and the capping vent, formed by combining them, to prevent extinguishment of the fuse, as described. Also, the raised vent 3, of the water table, into the chamber, as described, to increase its capacity to exclude water. Also, the chamber I, between the vent 3 and the orifice of the column *v*, as described.

Tenth, forming an enlarged or priming chamber 7, around or by the side of the timing rod, to insure an ignition of the fuse by presenting a large priming surface for the smaller vent, and allow the timing rod to extend through the capping and be adjusted without interfering with the priming, as described.

Eleventh, the file-cuts or fracturing points on the side of the timing rod, so as to break it off without the use of an instrument in adjusting the time in action, as described. And also the quick or double three or four-threaded screw on the timing rod to adjust it quickly, as described.

No. 34,060.—HENRY ISHAM, of New Britain, Conn.—*Improvement in Water Meters.*—Patent dated January 7, 1862.—This invention consists in the employment of wings or vanes on a vertical shaft within a surrounding circular casing provided with an induction passage for the entrance of the water to be measured, in a tangent to the circle or nearly so, to act upon the vanes—an aperture being made in the bottom of the casing so that the water shall move in a whirlpool to insure the turning of the vanes, and indicate accurate measurement of the water.

Claim.—The combination of the following elements, viz: first, the radial vanes on a vertical shaft; second, the surrounding case provided with a tangential induction pipe or passage, and with a central discharge at the bottom; and, third, the registering mechanism or the equivalent thereof, substantially as and for the purpose described.

Also, the flexible diaphram and vibrating lever attached to it, in combination with the shaft of the rotating vanes, and with the registering mechanism, substantially as and for the purpose specified.

No. 34,061.—A. K. JOHNSTON, of Middletown, Conn., and L. DOW, of Topeka, Kansas.—*Improvement in Envelopes of Cartridges for Fire-arms.*—Patent dated January 7, 1862.—The invention consists in forming the case of a cartridge of paper, cloth, or other fabric or textile material, which has been treated as in forming gun-cotton, in combination with a water-proof coating of collodion.

Claim.—As an article of manufacture, the envelope of a cartridge, constructed as above described and for the purpose set forth.

No. 34,062.—WM. R. KING, of Yellow Springs, Ohio.—*Improved Apparatus for Evaporating and Distilling.*—Patent dated January 7, 1862.—The nature and object of this invention will be understood by reference to the claim and engraving.

Claim.—The combination of the water space C, and tubes *a a*, around and above the furnace, with the evaporating pan situated in the upper part of said water space, substantially as and for the purpose specified.

Also, constructing the evaporating pan with a plain bottom, and diamond-shaped pipes or passages N N, connected by partition plates above the bottom, so as to form a flue space K therein, substantially in the manner and for the purpose described.

Also, the combination of the steam pipes or passages N N, and their connecting pipes *s s*, with the evaporating troughs M M and their connecting openings *m m*, substantially as described, so that the steam and sirup or liquid flow side by side together through their whole course, in the manner and for the purpose specified.

In combination with these steam pipes, or passages and troughs, arranged as described, also the strainers *p p*, removable as specified, for the purpose set forth.

Also, the combination of the receiving vessel H, having a strainer *h* therein, with the heating vessel G, in such a manner as to receive the clear liquid therefrom through a pipe J, below, and the impure liquid therefrom through a spout *i*, or its equivalent, above said strainer, for the purpose specified.

No. 34,063.—J. L. LANDIS, of Manheim Township, Pa.—*Improvement in Lifting Jacks.*—Patent dated January 7, 1862.—The nature and object of the invention are explained by the engraving and claim.

Claim.—The screw cap C, with its central neck or elongation, and surrounding cogs, in combination with the double-footed or clawed base I, and friction pulleys K, on the base of the screw-shaft B, together with the case R, slotted on both sides, arranged and operated as described and shown in the drawings.

Also, the adjustable winch or crank M N, when the same is provided with two sliding clasps *m n*, peg *t*, holes *s*, and spring P, in combination with its application to either axis *g h* of the cogged wheels C H, as shown and described for the purpose specified.

No. 34,064.—DANIEL LASHER, of Brooklyn, N. Y.—*Improvement in Furnace Grates.*—Patent dated January 7, 1862.—The invention consists of a bar formed with two parallel side pieces, with cross-bars between them of sufficient length to cause the intervening openings to be longest widthwise of the bar, each bar being so wide as to prevent being twisted and the cross-pieces not liable to be broken by expansion and contraction.

Claim.—Forming the grate bars for furnaces of boilers, &c., with the series of openings *c c*, crosswise of the bar, as specified, and so that these bars, when placed together, have longitudinal openings between the bars, as set forth.

No. 34,065.—T. MAYHEW, of Poughkeepsie, N. Y.—*Improvement in Lamps.*—Patent dated January 7, 1862.—The invention consists in having the cone or deflector to which the chimney is attached connected with guide rods, which pass through the lamp-top, for the purpose of rendering the wick-tube accessible, so that the wick may be trimmed or raised without detaching the chimney from the lamp-top.

Claim.—Elevating the chimney F perpendicular through the medium of the rods or guides D D, substantially as and for the purpose set forth.

No. 34,066.—JOHN MCLAIN, of St. Mary's, Ohio.—*Improved Automatic Fan.*—Patent dated January 7, 1862.—The fan is operated by clock mechanism, and so arranged that it may be placed upon a table, or suspended from the ceiling over a bed, the stand or support of the fan and mechanism serving as receptacles of various articles, the fan being designed for ventilation or driving away insects, &c.

Claim.—First, the particular arrangement of the crank *k*, rod *m*, arm *n*, projecting from the fan-shaft I, for operating the fan-shaft from the fusee *i*, as set forth in connexion with the brake *o*, arranged to act against the cylinder *g*, substantially as and for the purpose set forth.

Second, the attaching of the stand or upright B to the base A, by means of the slotted plate *b*, on tube *a*, and the arbor and pin *c d*, at the lower end of the upright B, when said parts thus connected are used in combination with a removable box C, or block *f*, and the cup D, substantially as described.

No. 34,067.—DANIEL MOORE, of Brooklyn, N. Y.—*Improvement in revolving Fire-arms.*—Patent dated January 7, 1862.—The invention consists in constructing the forward end of each chamber, (of a revolving cylinder,) which is open at the rear, with a rifled surface corresponding to the grooves in the barrel, so that the ball, which is entered with the cartridge from the rear of the chamber, is slugged previously to entering the barrel, and the explosion and detention of the ball, in being forced from the rifling, cause the chamber to press firmly against the rear end of the barrel, thereby cutting off and preventing as much escape of gases as possible.

Claim.—The employment, in a cylinder with chambers open at the rear, of rifling at the forward end of each chamber corresponding with the grooves in the barrel, for the purposes and as specified.

Also, the band or ring 2, having the recesses 3 3, for the stop lever or bolt, the said ring being formed as and for the purposes specified.

No. 34,068.—J. A. MORRELL, of St. Charles, Mo.—*Improvement in Pumps.*—Patent dated January 7, 1862.—The invention consists in the employment of one or more sliding cylinders, each provided with a valve opening upwards in the lower end, and arranged on the lower end of a stationary main in such a manner that the said sliding cylinders may be alternately raised and depressed by eccentrics on a driving shaft, so as to raise and force water up through the main pipe at every upward stroke of the pump.

Claim.—The employment of one or more sliding cylinders having valves suitably arranged in them opening upward, in combination with a stationary main pipe C, connecting rods *g g*, and the eccentrics G G, on the driving shaft H, all arranged and operating substantially as and for the purposes described.

No. 34,069.—ARTHUR NEILL, of Boston, Mass.—*Improved Combined Knife, Fork, and Spoon.*—Patent dated January 7, 1862.—The knife, fork, and spoon are so constructed that either of the first named shall, in conjunction with the last mentioned, form a suitable receptacle for the knife or the fork.

Claim.—As a new article of manufacture the combination made and operating substantially in the manner described, viz: the spoon formed with a case or protector sufficient to receive the fork and knife blade, and the knife or fork so formed as to complete a suitable receptacle for the bestowal of the third implement.

No. 34,070.—GILMAN M. PALMER, of Clinton, Mass.—*Improvement in the Method of Attaching Car-Wheels to Axles.*—Patent dated January 7, 1862.—The invention consists in the method of attaching and holding a car-wheel upon the axle, so that it may move independently of the axle.

Claim.—First, the use of the collar C, or its equivalent, whether forged with the axle or shrunk upon it, or attached to it by any other means, in combination with the wheel D and the hub F, or their equivalents, in the manner and for the purposes substantially as described.

Secondly, the use of the cap *c*, or its equivalent, in combination with the wheel D, the space *g*, and the collar C, or their equivalents, in the manner and for the purposes substantially as specified.

Thirdly, the collar E, or its equivalents, in combination with the screw *d*, the space *f*, and the hub F, or their equivalents, in the manner and for the purposes substantially as specified.

Fourthly, the cap *a*, or its equivalent, in combination with the collar E, the screw *d*, the wedge *h*, and the shield *l*, or their equivalents, in the manner and for the purposes substantially as set forth.

Fifthly, the use of the screw *d*, or its equivalent, in combination with the collar E and the wheel D, with its hub F, or their equivalents, in the manner and for the purposes substantially as specified.

Sixthly, the use of the wedge *h*, or its equivalent, in combination with the screw *d* and the collar E, or their equivalents, in the manner and for the purposes substantially as specified.

Seventhly, the shield *l*, or its equivalent, in combination with the space *s*, the collar E, and the hub F, or their equivalents, in the manner and for the purposes substantially as specified.

No. 34,071.—J. and E. C. NICHOLS and D. SHEPARD, of Battle Creek, Mich.—*Improvement in Grain Separators.*—Patent dated January 7, 1862.—A long inclined shoe (suspended by pendulous rods) attached to a threshing machine, to which a longitudinal swinging or vibratory movement is communicated, the object of the invention being to obviate the shocks produced by the rapid changes of motion in so ponderous a body.

Claim.—The arrangement of the shoe D, the rock shaft T, rods R' R2, the separating and conducting frames G H, operated in different directions by means of the crank shaft J and its connexions, together with the agitating fingers, the several parts operating conjointly for the separation of grain from the straw, as is specified.

No. 34,072.—HERMAN PIETSCH, of New York, N. Y.—*Improved Gold and Silver Amalgamator.*—Patent dated January 7, 1862.—The pulp, as it comes from the stamping or crush-

ing mill, passes into the pipe B, and is forced through the box by pressure, or any mechanical means. The spaces F are supplied with the requisite quantity of quicksilver, and as the pulp is deflected downward the gold or silver in the pulp will be brought in contact with the quicksilver and amalgamated.

Claim.—The construction of the amalgamator, with an induction pipe B, higher than the induction orifice, a tight horizontal box A, hooked partitions D, zig-zag top E, and inclined divided eduction orifice C, all arranged as shown and described.

No. 34,073.—G. B. SKINNER, of Damascus, Pa.—*Improved Water Wheel.*—Patent dated January 7, 1862.—The water falls on the part F, and flowing backward and downward towards the bottom G, it causes a rotary motion to the wheel from left to right, and, passing down the buckets, flows into the open space at the bottom, a portion of which from thence gradually passes out and through the small buckets E.

Claim.—Uniting the outer cylinder A to the inner one D by a series of spiral buckets B, that leave an open space *c* between themselves and the cylinder D, substantially in the manner and for the purpose described.

No. 34,074.—RICHARD P. SMITH and JOS. R. GATES, of Louisville, Ky.—*Improvement in Mole Ploughs.*—Patent dated January 7, 1862.—The press wheel is so constructed as to completely close the crevice made by the knife or coulter passing through the ground, and at the same time forming a ridge immediately over the drain and a duct (or channel-surface drain) on either side of the crevice made by the knife, thus carrying the surface water away from the crevice. With the capstan can be used any desired length of rope, by which the plough can be drawn a great distance without being removed.

Claim.—The draining plough, Fig. 4, provided with a press wheel *o*, with a concave periphery, when used in combination with the double-spool capstan, constructed as set forth, and for the purpose of under-draining.

No. 34,075.—DAVID J. STAGG, of New York, N. Y.—*Improved Device for Closing Doors.*—Patent dated January 7, 1862.—The device is designed to be applied to doors that open or swing both ways. The object of the invention is to obtain a means whereby the door may be kept in a closed state, not only when the draught is equal at both sides of the door, but also when the draught is greater at one side of the door than at the other side.

Claim.—The combination of the hinged bars or strips *c c*, and the weight or weights G, arranged and applied to the door, as and for the purpose set forth.

No. 34,076.—S. C. STETSON, of North Bridgewater, Mass.—*Improvement in Straw and Hay Cutters.*—Patent dated January 7, 1862.—The material to be cut is fed along to the knife or knives by means of a travelling apron which is actuated by the same movement that operates the cutting devices.

Claim.—The arrangement of the right angular bar *i k*, ratchet wheel *k*, and bar *w*, operating together as described.

No. 34,077.—W. O. STRONG, of Detroit, Mich.—*Improvement in Weighing Registers.*—Patent dated January 7, 1862.—The register is attached to the scale beam in such a manner that the motions of the beam will cause the index finger to move and record faithfully the exact number of times that the same or an approximate weight has been weighed upon the scale.

Claim.—The travelling bar T, with the angular pieces I and K attached, in combination with the pin-wheel W″, or its equivalent, and springs, either spiral or otherwise, working substantially in the manner and for the purpose set forth.

No. 34,078.—WM. A. SWEET, of Syracuse, N. Y.—*Improvement in Scroll Saws.*—Patent dated January 7, 1862.—The object of this invention is to attain a more perfect mechanical arrangement, by which the saw is propelled and supported, and to secure the greatest possible delicacy in the vertical strain of the saw while in operation. Provision is also made for the instant removal of the saw-dust, so that the eye of the operator may follow the lines with rapidity and accuracy.

Claim.—First, the combination of the adjustable cylinder K, the valve and wind chest D, the valve V, the saw head F, the saw B, and the adjustable slides F and X, substantially as and for the purposes described.

Second, the loose cylinder K, when adjusted, substantially as specified, so as to form a yielding hold-down upon the stuff, both by its own weight and atmospheric pressure, for the purposes substantially as described.

Third, attaching the cylinder K by the set screw *z*, in order to obtain a rake adjustment, substantially as set forth.

Fourth, combining the cylinder K, enclosing the saw-head, with the auxiliary frame-work and set screw *z*, or its equivalent, and slotted arms O′ O′, and set screws O O, for the purpose of attaining both a lateral and rake adjustment of the saw, substantially as and for the purposes described.

No. 34,079.—A. F. WARD, of Philadelphia, Pa.—*Improvement in Telegraphing by Colors.*—Patent dated January 7, 1862.—This invention consists in the use, in telegraphing by colored plates, flags, lights, or other colored objects, of an alphabet table vocabulary, or code of signals, of which each letter, character, or sign is produced by two or more colors, or a corresponding number of exhibitions of a single color, the same number of colors or exhibitions of color being used throughout the whole alphabet.

Claim.—The use of a table or key composed of squares arranged as set forth, for the purposes specified.

No. 34,080.—WM. S. THOMPSON, of Rochester, N. Y.—*Improvement in Lamps.*—Patent dated January 7, 1862.—The cap C is permanently attached to the burner, rendering it unnecessary to have a slot in the side of the cap for the passage of the milled head, by which the wick is raised and lowered. The ratchet wheels are provided with a cover, closed at the ends, to prevent the passage of any vapor from the wick, thus obviating danger of explosion.

Claim.—First, the means, substantially as described, of preventing the escape of vapor from the wick through the opening left for the ratchet wheels, whereby all danger of explosion is obviated.

Second, in combination with the means recited in the first claim, the arrangement described of the cap C, burner B, and ratchet wheel *d*.

No. 34,081.—ROBERT WELCH, of Frankford, Pa.—*Improvement in Sewing Machines.*—Patent dated January 7, 1862.—This invention relates to the use of a thread-feeding apparatus for feeding the thread to the perforating needle, so combined with the cloth-feeding apparatus that the quantity of thread supplied for each stitch will always be in proportion to, or will correspond with, the length of that stitch.

Claim.—First, feeding the thread to the needle of the sewing machine by means of a shaft L, rotated by positive connexion with the cloth-feeding mechanism, substantially as and for the purposes set forth.

Second, the use, in connexion with a shaft L, actuated as set forth, of a cone M, provided with a number of grooves *c c*, to vary the feed of the thread in accordance with varying thicknesses of material to be sewed.

No. 34,082.—AMOS WESTCOTT, of Syracuse, N. Y.—*Improvement in Churns.*—Patent dated January 7, 1862.—In addition to ordinary floats or dashers, appliances are used to secure an interchange of the fluid from end to end of the box, and to gather the butter to the centre of the churn after it is separated, so as to more perfectly work it, and at the same time to force through the fluid, whether milk or cream, while in the form of spray.

Claim.—First, the employment of the diagonal float-wheels *b* and *b b*, in combination with the shaft and dasher paddles *c c c*, constructed essentially as and for the purpose described.

Second, the combination of the diagonal float-wheel *b b* with the diaphragm, Fig. 3, and chamber, Fig. 4, constructed as and for the purpose set forth.

Also, the trough *f* and *f f*, in combination with the chamber diagonal float-wheels and dasher paddles described.

No. 34,083.—H. P. WESTCOTT, of Seneca Falls, N. Y.—*Improvement in Panelling Machines.*—Patent dated January 7, 1862.—This machine is designed for working the tenon or tongue on panels having a raised surface, and is also adapted to rabbeting and matching and grooving on various kinds of work and stuffs.

Claim.—The combined arrangement of the spring-pressure guide L, constructed and operating as described, the stationary guide B, and separately adjustable disks or cutter heads D D, substantially as and for the purposes specified.

Also, the construction and arrangement of the cutters *g g* with the round axle shanks *m m*, projecting at right angles from the planes of the cutter's motion, and fitting into sockets of the disks or cutter heads D D, in positions parallel with the axis of the said disks, thus producing the angular and axle adjustments thereof, substantially as and for the purposes specified.

No. 34,084.—F. G. WOODWARD, of Worcester, Mass.—*Improvement in Breech-loading Fire-arms.*—Patent dated January 7, 1862.—The breech-piece has a deep recess in one side, and its front portion is bored out to within a short distance from the recess, the bottom of this bore constituting the face of the breech. The bored portion of the breech-piece is screwed into the rear portion of the barrel, which protrudes through the rear of the cylindrical portion of the breech-holder. The screw-threads are cut away in segments, so that the hollow front portion of the breech-piece may pass over the protruding rear portion of the barrel, so that by turning the breech-piece a short distance, the face may be brought up so tight against the barrel as to prevent leakage. The hammer protrudes through a screw-cap fitted on the end of the breech-piece, so as to be engaged by the sere H. A recess *z*, to run on a guide-stand, is cut on one side of a groove, in the lower part of the exterior of the breech-piece, to allow the latter to be turned for screwing it up to the barrel. A notch in the side of the breech-holder serves to lock it when screwed up tight.

Claim.—The movable breech-piece B, constructed with a recess *b b*, groove *g*, and recess *s*, fitted with a hammer D, main-spring *k*, sere H, and handle B′, and having a screw connexion with the breech, all substantially as described and applied to operate in combination with the trigger I, and with notch *t* and stud *r* of the breech supporter, substantially as set forth.

No. 34,085.—JOHN AMMIDON, assignor to himself and L. STREETER, of Springfield, Mass.—*Improvement in Harness Buckles.*—Patent dated January 7, 1862.—The bar A, upon which the tongue *g* is placed, gradually increases in size up to each side of the tongue, forming a collar, which holds the tongue in place.

Claim.—As a new article of manufacture, a harness buckle, constructed substantially as described.

No. 34,086.—EDWARD BROWN, of South Reading, Mass., assignor to JOHN W. PIPER, of Lynn, Mass., assignor to B. D. GODFREY, of Milford, Mass.—*Improvements in Waterproof Soles for Boots and Shoes.*—Patent dated January 7, 1862.—The edge of the outer sole of a double India-rubber sole is so formed as to turn up outside the middle sole and conceal it, so as to avoid the necessity of trimming the edges as heretofore.

Claim.—The double India-rubber sole, formed as described, the edge of the outer sole being turned up to conceal the edge of the middle sole, for the purpose set forth.

No. 34,087.—M. R. CLAPP, assignor to Himself and EDWARD MYNDERSE, of Seneca Falls, N. Y.—*Improvement in Steam Fire Engines.*—Patent dated January 7, 1862.—The object of this invention is to prevent the unsteadiness or tremulousness occasioned by the rapid working of a steam engine when placed upon a wheeled carriage by arranging two cylinders of the engine in such relation to each other and to the pump that their strokes are made simultaneously in opposite directions.

Claim.—The combination and arrangement of two steam cylinders, the pistons of which move simultaneously in opposite directions with the pump of a steam fire or other portable engine, substantially in the manner and for the purposes described.

No. 34,088.—LANSING MARBLE, assignor to Himself and TOWNSEND NORTH, of Vassar, Mich.—*Improvement in Baskets.*—Patent dated January 7, 1862.—The claim and engraving explain the nature of this invention.

Claim.—As an improved article of manufacture, a basket, formed of two series of overlapping splints A A extending from side to side, secured by hoops and rivets, and having a conical bottom B, with central bolt or rivet *d*, and otherwise made, substantially as shown and described.

No. 34,089.—E. W. PIERCE and W. J. CLARK, assignors to W. J. CLARK & Co., of Southington, Conn.—*Improved Soldier's Cot.*—Patent dated January 7, 1862.—A series of cast metal transverse bars or supports of bow form are connected to longitudinal jointed rods which hold a sacking-bottom. A head-piece or support is provided, together with a head-elevating device. The whole is capable of being folded within a small compass for transportation.

Claim.—First, the employment or use of the bow or equivalent-shaped bars A, in combination with the jointed rods *c* and canvas B, arranged substantially as and for the purpose set forth.

Second, having the pieces *b* of the rods *c* at the head of the cot, curved as shown at *e*, in order to form a pillow of the canvas at that point, as set forth.

Third, the adjustable bars *f f* attached to the head bar A of the cot, when said bars are used in connexion with the series of bars or supports A and jointed rods *c*, as set forth.

No. 34,090.—W. DE WITT, of Cleveland, Ohio.—*Improvement in Harvesters.*—Patent dated January 7, 1862.—A device for raising and holding a flexible cutter-bar so as to pass readily and easily over obstructions, and at the same time allow the cutter-bar to fall below the level of the wheels, and to render it firm, so that it cannot be depressed at any point of its elevation.

Claim.—The adjustable slotted cam-latch or key E, connected to the machine at or near the heel of the finger-bar, and operated in combination therewith by means of the lever L, in the manner and for the purpose specified.

No. 34,091.—BARTON S. ALEXANDER, of U. S. Army.—*Improved Projectile for Rifled Ordnance.*—Patent dated January 7, 1862.—This invention consists of a compound shot of iron and lead or of other metals in such a manner that the parts of the shot shall not separate when fired, and so that the inertia of the shot shall be more gradually overcome, and the strain on the gun consequently diminished.

Claim.—The mode of making two or more parts of a compound shot adhere together by the use of tin, solder, or any other metallic compound to which a rim of lead, when cast between those parts, will adhere.

Second, the hole *k* and the plug *l*, as a means of relieving the pressure caused by the compressed air or other confined substance between the two parts of the shot, and tending to separate them, as described.

No. 34,092.—MANASSEH GROVER, of Clyde Village, Ohio.—*Improvement in Ploughs.*—Patent dated January 7, 1862.—The invention consists in attaching the plough to the draught beam by a hinge joint at the centre of resistance on the mould board, by which it is made to conform freely to undulations in the surface of the ground, and the direct line of draught is always retained.

Claim.—The draught beam *c*, fastened by a hinge joint, arranged and operating substantially as and for the purpose set forth.

No. 34,093.—W. J. PITT, of Middletown, Conn.—*Improvement in Revolving Fire-arms.*—Patent dated January 7, 1862.—The invention relates to a means of removing the revolving chambers from contact with the barrel before they are rotated, and of forcing the one to be fired into firm contact therewith after being brought properly into line.

Claim.—First, the combination and arrangement of the screw H, recoil shield, lever F, and rack and pinion J *k*, or their equivalents, substantially as set forth.

Second, the arrangement of the spring L, thimble K, and pin D in and with the stock A, substantially as and for the purpose specified.

No. 34,094.—ROBERT RAMSEY, of New Wilmington, Pa.—*Improvement in Bee-hives.*—Patent dated January 7, 1862.—A combination of door and shutter to admit of ingress and egress for the bee and exclusion of the drone, and when desirable, for ventilation, and a shifting device for supporting the combs in the movable frames.

Claim.—First, the combination of the slide B, reversible sliding door *b*, and gauze-cover aperture *b2*, all arranged as before explained, and for the purposes specified.

Second, the specific combination of the grooved bars H H, movable bars I, and sliding sleeves K, constructed and employed in the manner and for the purposes set forth.

No. 34,095.—J. C. STOCK and J. E. EMERSON, of Trenton, N. J.—*Improved Process of Making Steel.*—Patent dated January 7, 1862.—This invention is fully set forth in the claim.

Claim.—The manufacturing of tools, cutlery, or other articles by first casting the articles in their proper forms of iron, with which a suitable quantity of the oxide of manganese has been combined, then converting them into malleable iron by decarbonization, but without changing their shape, and afterward converting them into steel by recarbonizing them to the requisite extent by heating in an air-tight pot or other receptacle with vegetable charcoal, all as before explained.

No. 34,096.—JOHN WADE, of Richmond, Ind.—*Improved Convertible Cane and Stool.*—Patent dated January 7, 1862.—The claim and engraving explain the nature of this invention.

Claim.—First, the extended division A, in combination with divisions B and C, in the manner and for the purpose substantially as set forth.

Second, the combination and arrangement of the divisions A B C, cap *f*, detent *i*, spring *j*, and angle iron T, in the manner and for the purpose set forth.

No. 34,097.—T. D. DAVIS, of Syracuse, and J. M. WALDRON, of South Otselic, N. Y.—*Improvement in Harvesters.*—Patent dated January 7, 1862.—This invention consists in the manner of attaching a series of movable cutters to their bar, so that they may readily be detached for repair and sharpening, or to replace any which may be destroyed.

Claim.—Securing movable blades in dovetail grooves in the cutter bar by means of a tapering rod *c*, operating in connexion with lugs *a* and protuberance *b*, substantially as explained.

No. 34,098.—J. W. HARDIE, of New York, N. Y., and A. S. HAYWARD, of Boston, Mass., assignors to A. S. HAYWARD, of Boston, Mass., and J. B. OGDEN, of New York, N. Y.—*Improved Combination of Knife, Fork, and Spoon.*—Patent dated January 7, 1862.—The claim and engraving explain the nature of this invention.

Claim.—Forming the handle of the knife A of a single piece of metal, with the blade in such a shape as to receive therein the fork and spoon handles, in combination with the formation of the forks and spoon handles, so as to pack securely therein, substantially as specified.

No. 34,099.—JOHN J. ALTHOUSE, of New York, N. Y.—*Improvement in Plastering Surfaces.*—Patent dated January 7, 1862.—The invention relates to the use of plastering surfaces in connexion with columns, supports, or piers of metal, and consists in producing during the operation of casting such irregularities upon the said surfaces as will insure the retention of plaster when applied as it usually is to laths.

Claim.—A metallic plastering surface, substantially such as described, for piers, columns, &c., produced during and by the operation of casting, substantially in the manner set forth.

No. 34,100.—J. H. BALSLEY, of Dayton, Ohio.—*Improved Step-ladder.*—Patent dated January 7, 1862.—The claim and engraving explain the nature of this invention.

Claim.—The employment of the supports A A, the braces D, and the horizontal rods connecting front and back of ladder, together with supports F F, braces *g g*, and hinged crossties G, arranged, connecting, and operating as and for the purpose specified.

No. 34,101.—W. S. BARTLE, of Newark, N. Y.—*Improvement in Pumps.*—Patent dated January 7, 1862.—The object of this invention is to obtain a double-action lift and force pump, having but two valves and a single piston head, the piston rod containing an air chamber for keeping up continuity of discharge and preventing the concussion produced by a dead stroke.

Claim.—The combination of the hollow piston rod B, capped or closed at the upper end of the valve E and head, with the cylinder in which they act, constructed and arranged substantially as described.

No. 34,102.—GEORGE H. BRUCE, of Lancaster, N. Y.—*Improvement in Bridges.*—Patent dated January 7, 1862.—This invention relates to the manner of combining and uniting two frames in one bridge, designated the arch frame and truss frame, each being a distinct structure and self-supporting when considered separately from the other; and also the combination of a tongue wedge with each pair of principal rafters at their apex, for the purpose of filling the space left between the ends of said rafters in a manner to compensate for any shrinkage of the timbers or sagging of the bridge, and to prevent any side slip to the rafters.

Claim.—First, the combination of a truss-bridge frame with an arch-bridge frame, so as to combine the strength of the two frames in one bridge, substantially as set forth.

Second, the tongue wedge D, in combination with the contiguous groove-ends of each pair of principal rafters, in the manner and for the purpose substantially as described.

No. 34,103.—WILLIAM BURNETT, of Boston, Mass.—*Improvements in Gun Stocks.*—Patent dated January 7, 1862.—A hand-hold is provided at or near the breech of a musket or other like fire-arm having a sword or bayonet, for the purpose of rendering the instrument more effective in a hand-to-hand encounter.

Claim.—Providing a musket or other like fire-arm, furnished with a sword or bayonet, with a suitable hand-hold at or near the breech, substantially as and for the purpose specified.

No. 34,104.—JOHN CHANDLER, of Collinsville, Conn.—*Improvement in Machinery for Cleaning Emery Wheels.*—Patent dated January 7, 1862.—This invention consists in placing one or more sliding frames on vertical guide rods, said frames having the wheels which are to be cleaned fitted in them, and allowed to rotate freely, and using in connexion with said frames a water-box or tank provided with a roller or rollers.

Claim.—The employment or use of a water-box or tank B, supplied with one or more rollers *c*, in combination with one or more sliding frames E′, for holding the wheels G, to be cleaned, all being arranged substantially as and for the purpose set forth.

No. 34,105.—GEORGE COLLINS and ENOCH PIPER, of Camden, Maine.—*Improvement in Pumps.*—Patent dated January 7, 1862.—The pump cylinder is constructed of glass, and fitted between metal bands, to prevent it from being fractured.

Claim.—A pump having a cylinder A, constructed of glass, with its ends fitted in metallic heads B C, as shown in combination with the piston E, of two metallic parts *i j*, perforated as shown, and provided with the packing F, and valve *m*, and connected together by the screw and nuts, all arranged as set forth.

No. 34,106.—GEORGE H. COOK, of New Brunswick, N. J.—*Improvement in Composition for Lining Tobacco Pipes.*—Patent dated January 7, 1862.—A composition of plaster of Paris and hydraulic cement or water lime, designed to possess the useful properties of plaster of Paris in setting and capability of being worked in a lathe, and free from its objectionable property of decaying or rotting under the influence of the moisture which condenses in the steam and bottom of the pipe.

Claim.—The use of the described composition for the lining of tobacco pipes.

No. 34,107.—JACOB DENNIS, of Marion, Iowa.—*Improved Washing Machine.*—Patent dated January 7, 1862.—The claim and engraving explain the nature of this invention.

Claim.—The adjustable bottom B, and the rubber D, when both are constructed, arranged and operated in the manner and for the purpose specified.

No. 34,108.—ADAM ECKERSON and J. H. REURY, of Pleasant Brook, N. Y.—*Improved Washing Machine.*—Patent dated January 7, 1862.—An arrangement of lever disk rubbing surfaces in a box of semicircular form. Also, an arrangement of springs and treadle, whereby the degree of pressure of the rubbing surfaces upon the clothes can be regulated while they are in motion to suit the finest or coarsest fabrics.

Claim.—First, the semicircular disks *c c′*, having corrugations on their inner faces, and fitted loosely on a bar passing longitudinally through the box, with the handles D D, the round bar spiral springs *g h*, and oblong semicircular box A, when combined, arranged, and operating as described.

Second, the longitudinally sliding disks C C′, round bar B, spiral springs *g h*, box H, pulleys *e f*, treadle E, and cords *c d*, when combined and arranged in the manner and for the purpose set forth.

No. 34,109.—J. A. FANSHAWE and J. A. JAQUES, of London, England.—*Improved Brush.*—Patent dated January 7, 1862.—The brush is provided with concentric or convolute projecting rubbing edges on both sides, which may be produced by pressing soft rubber of suitable form, or cutting them out of solid rubber.

Claim.—As an improved article of manufacture, a brush or scrubber having continuous concentric or convolute rubbing edges, made as shown and described.

No. 34,110.—G. W. GILBERT, of Bettsville, Ohio.—*Improvement in Churns.*—Patent dated January 7, 1862.—This churn contains two separate apartments communicating with each other, in one of which is a hollow staff having a vertical motion, and in the other are loose balls which collect and compact the butter as it forms.

Claim.—The arrangement of the hollow staff E, follower F, valve *a*, and lever D, in combination with the partition B, and loose balls *c c*, all constructed, combined, and operating in the manner and for the purpose explained.

No. 34,111.—GEO. P. GORDON, of Brooklyn, N. Y.—*Improvement in Printing Presses.*—Patent dated January 7, 1862.—The tympan sheet is made of paper and arranged so as to admit of its being easily replaced by a fresh one as fast as it becomes charged with "set-off" ink. One end of the sheet is attached to a vibrating nipper carrying rod and the other to a roller, which, by the action of an elastic cord, rolls it up after each impression, for the purpose of delivering the printed sheet to the pile table situated beneath the feed table. The platen vibrates and carries a pair of nipper arms provided with nippers which are caused to ascend and approach the feed table before each impression, to seize the sheet which is drawn off the feed table and down over the face of the platen; the tympan sheet is also by the same method unwound from the roller and drawn down over between the face of the platen and the sheet of paper. The sheet gauges are so constructed as to present the edge of the sheet accurately to the nippers, and the ink-distributing surfaces comprise a revolving cylinder and a revolving disk combined to secure a more even and thorough distribution of the ink than is possible by either device alone.

Claim.—First, the use or employment of a paper tympan sheet, operating substantially as set forth, for the purpose specified.

Second, the combination of the nipper arms, provided with the nippers, with the vibrating platen, operating substantially as described, for the purpose described.

Third, the combination of the nippers and grippers with the nipper arms; also, those with the vibrating platen.

Fourth, the combination of the nippers and nipper arms with a tympan sheet, operating substantially as described; also, these with a vibrating platen.

Fifth, the combination of the nippers and nipper arms with the feed table, operating substantially as described, for the purpose specified.

Sixth, the combination of the feed table with gauges constructed and operating substantially as described, for the purpose set forth.

Seventh, the combination of the stationary bed, and the revolving ink-distributing table, with the platen, operating substantially as described.

Eighth, operating the vibrating inking roller arms or roller frame, by or through the motion of the vibrating platen.

Ninth, operating the nipper arms, provided with the sheet taking nippers, by or through the motion of the vibrating platen.

Tenth, the combination of the ink-distributing tables or disks, or a single ink-distributing table or disk, the ink-distributing cylinder, and the rocking roller, for the purpose described.

Eleventh, combining the double-revolving ink-distributing tables or disks with the ink-distributing cylinder.

Twelfth, in combination with the springs 8, and roller frame, the sliding rods 7, holding and carrying the inking rollers, as shown.

Thirteenth, raising the nippers, when taking or delivering a sheet, to such a height above the face of the platen that the relative position of the vibrating platen and the feed table shall allow the platen to vibrate freely under the feed table, substantially for the purpose set forth.

No. 34,112.—THOMAS S. LAMBERT, of Peekskill, N. Y.—*Improvement in Tourniquets.*—Patent dated January 7, 1862.—A P represents the arterial pad, and C P a counteracting pad. The engravings and claim explain the nature and object of the invention.

Claim.—First, the application of the elastic band, in combination with a pad for producing pressure on arteries, in the manner set forth.

Second, the combination of an elastic band with a non-elastic one and with the pads for securing them in place and for making pressure, in the manner set forth.

Third, the application of the wings to the pads so as to permit collateral circulation, in the manner set forth.

Fourth, the attachment of the wings by hinges to the pads, in the manner set forth.

Fifth, the checks on the wings to prevent the bands from slipping, in the manner set forth.

Sixth, the combination of the pads with the wings and inelastic bands, for the purpose of making pressure on blood-vessels, in the manner set forth.

No. 34,113.—HIRAM LITTLEJOHN, of Troy, N. Y.—*Improved Clothes Frame.*—Patent dated January 7, 1862.—The engraving and claim explain the nature of this invention.

Claim.—The arrangement of the vertically movable toothed rack, F, in combination with the pivoted radial arms A, provided with toothed segments E, and connected together by clothes lines B, substantially as set forth.

No. 34,114.—THEODORE MARSCHALL, of New York, N. Y.—*Improvement in Piano-fortes.*—Patent dated January 7, 1862.—This invention consists in the employment of two rings applied in such a manner as to clamp the string or strings with the same screw which screws them to the block, so that the amonnt of pressure exerted by the strings on the sounding board may be adjusted at pleasure, for the purpose of holding the strings at either or each of the bearings or points between which they severally vibrate.

Claim.—The employment, for the purpose specified, of the rings *c*, and screws *d*. applied in the manner shown and described.

No. 34,115.—L. G. MARSHALL, of San Francisco, Cal.—*Improved Amalgamator.*—Patent dated January 7, 1862.—The gravel or dirt from the diggings, or pulverized ore mixed with water, is made to flow evenly over the surface of the table, and in its passage down its course is arrested by the batteries *b b* forming numerous eddies which serve to catch the fine particles of gold; the effect of the galvanic battery being to cause the precious metal to adhere to the table as an amalgam, the sulphurets or black sand, if any, passing down upon the lower table into sinks.

Claim.—The combination of trough Y, adjusting slide Z, metallic surface plates X W, of two inclined tables, batteries *b* of the upper table and compartments, and sinks *h* of the lower table, all the parts arranged in relation to each other as described, so that a galvanic current may be made to pass over both tables, and all the batteries *b*.

No. 34,116.—J. MCCLUSKY, of Milwaukie, Wis.—*Improved Apparatus for Submarine Attack on Enemy's Vessels.*—Patent dated January 7, 1862.—This invention consists of a grappling and drilling or boring apparatus so applied to a boat as to be capable of being worked by steam or other power under its decks to grapple and drill holes in an enemy's ships and other vessels below the water-line: it also consists in so combining the drill or boring tool with a cannon, that, after having drilled a hole, it may be fired through it from the cannon.

Claim.—First, the grappling apparatus, consisting principally of two levers E E, a grappler F, windlasses D D and G, chains *e e f*, the whole combined and applied to a boat in combination with a drill or boring device, substantially as specified.

Second, the employment as the stock for the drill or other boring tool of a tube charged like a cannon for the expulsion of the said tool, substantially as specified.

No. 34,117.—JOHN MCEVOY, of New York, N. Y.—*Improvement in Hospital Knapsacks.*—Patent dated January 7, 1862.—For containing medicines, lint, bandages, splints, and surgical instruments. It is designed to be carried by the surgeon's servants or attendants during a march or an engagement.

Claim.—As an article of manufacture, a hospital knapsack for the use of army surgeons, composed of a body of wicker-work provided with partitions and doors, arranged substantially as described, and covered with leather or any proper water-proof cloth or material, substantially as set forth.

No. 34,118.—PETER W. NEEFUS, of New York, N. Y.—*Improvement in Water-Closets.*—Patent dated January 7, 1862.—This invention is designed to be used in ships or other vessels, and consists in the means of opening the upper valve K, and the valve admitting the water by the upward movement of the rod D, the lower valve L remaining closed, and by the downward motion of the rod the lower valve opens after the upper one is closed, thus preventing the admission of water or air from below.

Claim.—First, working the valves, K and L and W, by the handle or rod D, or its equivalent, as recited.

Second, operating the lower valve independent of the upper with the same handle, as described.

Third, the combination of the valves K and L, rod D, raising water-valve box E, and closet-valve A, as set forth.

No. 34,119.—A. PHILIPPI and D. MOORE, of Elizabethport, N. J.—*Improvement in Railroad Switches.*—Patent dated January 7, 1862.—The invention consists in the employment of a movable bar or rail A, so arranged with levers and springs as to work a switch bar while the train is passing over the former, rendering the attendance of a switchman unnecessary.

Claim.—The loose switch bar, with sloped ends, moving in the slotted rail, and receiving both the flange and tread of the wheel when attached to the shaft B, and connected with lever and springs, and moved by the train while passing, as described, and for the purposes set forth.

No. 34,120.—MOSES POND, of Boston, Mass.—*Improvement in Stoves.*—Patent dated January 7, 1862.—This invention consists in the employment of two separate and independent flues, one to each oven, and each supplied with suitable dampers, so that all the heat may be concentrated around a single oven, and one oven be used independently of the other.

Claim.—The two ovens E and F, each having separate and independent flues from the same fireplace, in combination with the openings *r* and *s*, and their slides *t*, operating as described, and for the purpose specified.

No. 34,121.—THOMAS S. CLOGSTON, of Boston, Mass., assignor to Himself and HORACE P. WAKEFIELD, of Reading, Mass.—*Improvement in Kitchen Ranges.*—Patent dated January 7, 1862.—The first and second claims with the engravings explain themselves. The oscillating grate is intended as a substitute for the usual water back in ranges, and is so constructed and connected with the cold water fountain above and hot water below that communication with said fountains may be open, and circulation ensue, or be entirely closed, when the circulation will cease, by rotating the cross-piece P.

Claim.—First, the combination of a cubical fire-box, with the three water legs of the boiler in contact with the three surfaces of the said fire-box, as described, so that two of said water legs shall be interposed between the fire and the ovens to moderate the heat thereof, substantially as set forth.

Second, the arrangement and combination of an oven between three water legs of the boiler on three of its sides, while the two flues from the fire-box pass over the top of said oven, and thence down its further side to the bottom of the water legs, and thence around by the outside and to the rear, as substantially described.

Third, the oscillating tubular grate, in kitchen ranges, constructed and operating substantially as set forth.

Fourth, the combination of the stationary part P with the oscillating grate, substantially as set forth.

No. 34,122.—JAMES P. ELLICOTT, of Washington, D. C.—*Improved Refrigerator.*—Patent dated January 7, 1862.—This refrigerator contains four compartments, two of which have direct communication with the ice, the other two being made air-tight and receiving their temperature from the surrounding atmosphere. Each compartment is provided with a door, and the whole is made to revolve upon a stand.

Claim.—A rotating refrigerator L, subdivided into four or more compartments as is herein described, combined and arranged with the pin K, and under frames L M, and pulleys N N, substantially as and for the purpose specified.

No. 34,123.—G. E. VANDERBURGH, of Mamaroneck, N. Y., assignor to Liquid Quartz Company of New York, N. Y.—*Improvement in forming Emery Wheels and Grinding Surfaces.*—Patent dated January 7, 1862.—The gritty and cutting substances proposed to be used in the production of artificial cutting and grinding surfaces consist of the following substances: Emery, corundum, franklinite and glass in a suitably comminuted state; also sand, fragments of buhr stone, &c., with a cementing material for uniting the various substances, consisting of a peculiar character of liquid silicate, as described in a patent granted to the said Vanderburgh, May 29, 1860.

Claim.—First, employing the liquid silicate which is referred to in the body of this specification, of the cementing material in the process of producing articles of artificial stone suitable for cutting, grinding, and other purposes.

Second, after any properly prepared gritty or cutting substance has been incorporated with such a proportion of the above-mentioned liquid silicate as will produce a pasty substance into any desired shape by moulding and pressure.

Third, the curing and toughening of the said moulded articles of gritty paste, by first subjecting them to the action of a moderate degree of heat for the purpose of drying the same, and then subjecting the said articles to the action of a higher temperature, by the aid of a sand bath, or some other analogous heating apparatus.

No. 34,124.—JOHN BALDWIN, Jr., of Berea, Ohio.—*Improvement in Machines for Making Grindstones.*—Patent dated January 14, 1862.—This invention consists of a device for drawing or carrying away from the operator the dust and fine particles of sand thrown off during the process of turning the stone.

Claim.—The enclosure G, fan L, chamber M, and discharge pipe N, when these parts are arranged as described, and used in combination with a machine for forming grindstones, and operating as and for the purpose set forth.

No. 34,125.—ALFRED BLISS, of New York, N. Y.—*Improvement in Lamps.*—Patent dated January 14, 1862.—This invention consists in the use of an annular metal clamp with a hinge or joint and inclined projections in connexion with loops or lips attached to the lamp top, the clamp being fitted on a flanch at the lower end of the chimney and secured to the lamp top by means of its inclined projections fitting under the loops or lips on the lamp top.

Claim.—The annular clamp D, formed of two parts *b b*, connected together at one end by a hinge or joint *c*, in combination with the loops or lips *f f*, on the lamp top A, substantially as and for the purpose set forth.

No. 34,126.—FREEMAN BRADY, Jr., and J. C. NOBLE, of Washington, Pa.—*Improvement in Magazine Guns.*—Patent dated January 14, 1862.—A segmental plate is fixed to the stock immediately in the rear of the breech. This plate is pierced to receive the front end of the magazine. The rear end of the magazine is held in position by a catch and thrown out by a spring.

Claim.—The combination of the aperture *f*, catch G, and spring H, employed as set forth, to secure the magazine and permit its ready insertion and removal laterally of the stock.

No. 34,127.—WILLIAM C. BRIDGES, of Philadelphia, Pa.—*Improvement in Optical Telegraphs.*—Patent dated January 14, 1862.—The invention consists of a tube with a lens and one or more adjustable mirrors in combination with suitable devices for obscuring and exposing the lens (the latter being illuminated by the rays of the sun reflected from the mirrors) or for moving differently colored plates of glass to the front of and away from the lens, so that, on observing the latter from a distance, its exposure and obscuration or the different colors seen will be the means of informing the observer of the nature of the messages transmitted by the operator.

Claim.—The tube B, with its lens and one or more adjustable mirrors, arranged substantially as described, in combination with the device described, or any equivalent to the same, for obscuring or exposing the lens or moving differently colored plates of glass to the front of and away from the lens, as set forth for the purpose specified.

No. 34,128.—MOSES CHANDLER, of East Corinth, Maine.—*Improvement in Horse Hoes.*—Patent dated January 14, 1862.—The object of this invention is to obtain an implement which may be adjusted so as to furrow land for planting either in hills or drills, and form the furrows at a greater or less distance apart, and at greater or less depth, as may be desired. The implement is designed to be capable of covering seed in the drills of an uniform depth, and of any desired depth, and also to hoe and hill-up growing crops.

Claim.—First, attaching the wings H H of the implement to the beam A, by means of the rod I J, which are fitted in eyes *g*, at the end of bolts K, in the beam, in combination with the joints *h*, which connect the front ends of the parts *d* of the wings to the rods I, and the slot *i*, in the lower parts of the rods J, through which the bolts *f*, at the back ends of the parts *d*, pass, whereby the wings may be adjusted, as and for the purposes set forth.

Second, forming the wings H H of two parts *d e*, connected together by a pivot or bolt *f*, for the purpose specified.

Third, the adjustable and yielding cultivator blades F, when arranged as shown and used in connexion with the wings H, for the purpose set forth.

Fourth, in combination with the wings H attached to the beam A, as shown, the stay rods L, and adjustable bolt M, arranged as shown, to insure the proper bracing of the wings H, at all points of their adjustment, as described.

No. 34,129.—EDWIN CLARK, of Lancaster, Pa.—*Improvement in Flouring and Grist Mills.*—Patent dated January 14, 1862.—The object of this invention is to obtain a silent feed by means of a combination of devices, shown in the engravings, and designated by the claim.

Claim.—First, the conic cylinder J, with its central distributing disk Y, connecting arms Z, and lugs R R beneath it, when employed in combination with the balance rine, substantially as set forth.

Second, the distributing disk Y (Fig. 3,) with its lugs R, without the conic cylinder, when employed in combination with the balance rine aforesaid.

Third, the adjustable tube O, with its vibrating section O, and set-screw P, in combination with the distributing disk Y, substantially as specified.

No. 34,130.—EDWIN CLARK, of Lancaster, Pa.—*Improvement in Alarm Indicator for Grist and Flouring Mills.*—Patent dated January 14, 1862.—This device is intended to indicate any irregularity in the running of the buhrs, whether such irregularity arises from the feed or any other cause, or whether the hopper be full or empty.

Claim.—First, combining with the buhr spindle of a mill, or with any other moving part of the mill gearing, a governor, and an alarm apparatus, by which any variation from the proper or previously-regulated velocity of the buhr or buhrs, for good grinding, will be brought to the notice of the attendant, substantially as described.

Second, in combination with the buhr spindle, or other moving part of the mill gearing, and a governor, a rod hand, or indicator, that will show to the attendant when the speed of the buhr, or buhrs, is at its regulated or desired velocity, or any variation therefrom, whether greater or less, substantially as described.

No 34,131.—WILLIAM F. COCHRANE, of Springfield, Ohio.—*Improvement in Grain Threshers and Separators.*—Patent dated January 14, 1862.—The object of this invention is to dispense with a long connecting rod or coupling shaft between the prime mover and bearing, and to diminish the vibration of the frame and consequent strain upon and jar of the gearing; to render the gearing stand adjustable so as to vary the distance between the countershaft and shafts of the threshing cylinder and separating mechanism; to regulate the position of the gearing stand relatively to the threshing and separating mechanism whereby the tension of the driving bands can be varied by the attendant without moving from his position or stopping the machine; to insure steadiness of movement and diminish the liability of the cylinder to burst, and to reduce the strain and torsion upon the gearing, threshing cylinder, and separating mechanism.

Claim.—First, locating the driving gear upon the base of the machine, substantially in the manner described for the purpose set forth.

Second, enclosing the driving gear in a solid stand or frame, independent of the main frame, substantially as described.

Third, the combination of the diagonal braces *a* with the combined stand B, substantially as described for the purpose specified.

Fourth, pivoting the combined stand to the main frame, substantially in the manner and for the purpose described.

Fifth, the combination of the combined stand B, lever C, and lifting screw *c*, substantially in the manner described for the purpose set forth.

Sixth, driving the threshing cylinder directly from both ends of the countershaft, and independently of the separating mechanism, as described.

Seventh, driving the threshing and separating mechanisms independently of each other by means of pulleys on each end of the countershaft, cylinder shaft, and beater shaft, as described, for the purpose specified.

No. 34,132.—WILLIAM F. COCHRANE, of Springfield, Ohio.—*Improvement in Grain Threshers and Separators.*—Patent dated January 14, 1862.—The object of this invention is to give any desirable angle to the grain belt while in operation, and to lower the mechanism within the main frame while being transported from place to place; to vary the distance between the driving gearing and threshing cylinder at will, while the machine is in motion, and to so arrange the driving gearing and separating mechanism that their relative positions may be varied at will without deranging the driving gear.

Claim.—First, mounting the threshing and separating mechanisms in an independent adjustable frame, capable of moving freely in a vertical plane within the main frame, for the purposes set forth.

Second, the combination of the driving gearing and threshing cylinder, substantially in the manner described.

Third, the combination of the driving gearing and separating mechanism, substantially in the manner described.

No. 34,133.—WILLIAM F. COCHRANE, of Springfield, Ohio.—*Improvement in Grain Threshers and Separators.*—Patent dated January 14, 1862.—The object of this invention is to dispense with the use of complex and costly gearing requiring considerable power to drive it. The creeping cloth is used in place of the common screw conveyor. The engravings and claim explain the nature of the invention.

Claim.—First, a creeping cloth arranged transversely across the machine, to convey the winnowed grain, directly from the vibrating shoe to the bagger.

Second, the combination of a vibrating shoe, a creeping cloth, and a fan shaft, substantially in the manner described.

Third, the combination of a creeping cloth, a fan shaft, and a vibrating shoe, with an adjustable or independent frame, substantially as described.

No. 34,134.—J. H. DENNIS, of Louisville, Ky.—*Improvement in Running Gear of Railroad Cars.*—Patent dated January 14, 1862.—This invention consists of a compound journal box affording both a bearing and connexion for the adjacent ends of a divided axle, and also the employment of an automatic lubricating-device.

Claim.—First, the combination with a divided axle C C′, or two axles working in line, of a compound journal box E, constructed and adapted substantially as shown and explained, to afford both bearings and connexion to the adjacent ends of the said axles.

Second, the combination of the wick H, tube I, and clamping screw L, employed substantially in the manner explained to supply the journals automatically with oil, and control the flow thereof as may be required.

No. 34,135.—J. H. DENNIS, of Louisville, Ky.—*Improvement in Railroad Turn-Table.*—Patent dated January 14, 1862.—The object of this invention is to enable the driver readily to reverse the position of his car without leaving his position upon the platform or seat.

Claim.—Any device, substantially as explained, whereby the table, while permitted to turn freely in one or the other direction, is automatically arrested the instant the rails are in position to enable the car to return on the track by which it approached.

No. 34,136.—J. H. DENNIS, of Louisville, Ky.—*Improvement in Omnibus Springs.*—Patent dated January 14, 1862.—The invention consists in a combination of springs and supporting bars, for the purpose of attaining ease and quietness of motion and reducing the weight and cost of construction of the carriage to which they are applied.

Claim.—Connecting the bed G to the longitudinal bars or springs B B, by means of a transverse bar F, springs E E′, and hangers D, substantially as and for the purposes explained.

No. 34,137.—JOSEPH EDGECOMB, of Worcester, Mass.—*Improvement in Boring Machines.*—Patent dated January 14, 1862.—An adjustable frame or stand is hinged or pivoted at its lower end, between the front lower corners of ear-pieces which are fastened to the rear end of the base piece. Projections with screws working through curved slots in the ear-pieces serve to adjust the frame in any inclined position. The front edges of this frame are provided with flanges upon which slide the hooked edges of the gear frame, which latter clasps the flanges only at its four corners. A rack piece is hinged at its lower end to a projection on the left lower side of the frame, the top of which plays back and forth in a slot in the lower side of a tubular projection on the under side of the cap piece which is screwed to the top of the frame. A regulating rod passes through two guide pieces cast on the right side of the rack, said rod being provided with a stop piece and set-screw which fastens the stop piece to the rod at any desired elevation.

Claim.—First, constructing frame F in curved form, and so as to extend around the flanges *d d* of frame D, to reduce friction and afford sufficient space for the free operation of the rack and gearing, substantially as described.

Second, the combination of the curved hinged rack piece M and gear L with frames D and F, substantially as and for the purpose set forth.

Third, the combination with the top of frame D and rack piece M, of the cap piece N, and its slotted tubular projection *m*, and its spring *n*, as and for the purposes set forth.

Fourth, the combination of the adjusting rod O with rack piece M, frame F, and the parts connected therewith, substantially as and for the purposes set forth.

No. 34,138.—JAMES FITTON, of Cavendish, Vt.—*Improvement in Carding Engines.*—Patent dated January 14, 1862.—This invention consists in so combining and arranging a moving endless apron with those parts of a carding engine which precede the main card cylinder in operating upon the fibrous material submitted to the action of the carding engine, as to receive the droppings from said preceding parts and convey them to the main card cylinder, so that said droppings may be incorporated with the material being acted upon by the engine, and prevented from becoming waste or an inferior quality of material.

Claim.—The arrangement and combination of the apron with the mechanism preceding the main card cylinder, in such a manner that the apron shall extend under the said mechanism for the purpose described.

No. 34,139.—W. W. FLENNIKEN, of Colony, Iowa.—*Improved Water-Wheel.*—Patent dated January 14, 1862.—The object of this invention is to prevent the escape or leakage of water around the wheel at its junction with the top and bottom of the scroll, and consists in having the buckets of the wheel at their lower parts and on the ends connected together so as to form a continuous rim at the bottom of the wheel, the upper edge of the buckets being curved so as to conform to the shape of a deflecting plate which is attached to the top of the scroll and serves to guide or deflect the water so that it will act properly against the buckets, the upper edges of the latter working in close proximity to the deflecting plate.

Claim.—Having the buckets *c* of the wheel F connected at their outer ends and lower part so as to form a continuous rim all around the wheel, while the upper ends of the buckets are detached, when said wheel thus constructed is used in combination with a stationary deflecting plate E, placed at the top of the wheel and secured to the scroll A; all being arranged as and for the purpose set forth.

No. 34,140.—HENRY B. GOODYEAR, of New Haven, Conn.—*Improvement in Gaiters.*—Patent dated January 14, 1862.—The engraving and claim explain the nature of this invention.

Claim.—As a new article of manufacture, a gaiter wholly or in part elastic made of vulcanized India-rubber, or of its elastic compound, or its equivalent, and backed by a knit web or other textile tensible fabric, the upper surface being varnished, and the whole constructed substantially in the manner set forth.

No. 34,141.—WILLIAM GRAICHEN and C. HOFFMAN, of Clinton, Mass.—*Improvement in Power Looms.*—This invention consists first in the peculiar construction of and mode of applying and operating the grids, whereby they are made to act only upon the thread of the shuttle that is in operation and passing into one of the boxes, and not upon the threads of the shuttle or shuttles that are at rest in the boxes; second, in the mode of combining one of the feeling-forks with the lever by which the belt shifter is thrown out of its notch, to throw the loom out of gear when the filling has broken or given out; third, in the positive stop mechanism to stop the loom after it is thrown out of gear.

Claim.—First, the grids A A′, constructed with projections *a a*, in front of the lower parts of their dents *b b*, applied in guides formed in, or upon, or attached to the lay, and having a rising and falling motion, substantially as and for the purpose described.

Second, operating the so-constructed grids by means of a rock-shaft B, arms *c s g*, a spring *f*, and a fixed stud *h*, the whole applied, arranged, and combined substantially as specified.

Third, the feeling-fork lever E working on a fixed fulcrum and combined with the horizontally moving lever H, which acts on the belt shipper by means of a bent lever G, attached to the said lever H, and connected with E, substantially as specified.

Fourth, the positive stop motion composed of the stop piece v, on the lever H, the rod T, the spring *y*, the lever *s*, and stop-wheel *q*, and spring *z*, the whole arranged, combined, and operating substantially as and for the purpose specified.

No. 34,142.—JOHN J. HALEY, of South Dedham, Mass.—*Improved Rollers for Wringing Machines.*—Patent dated January 14, 1862.—The object of this invention is to firmly unite the rubber roller with a metallic shaft; and consists in first applying a coating of copal varnish to the metal shaft, then closely winding a small twine upon the same, and applying one or more coatings of India-rubber or other adhesive cement; the same cement being applied to the bore of the tube, the latter is then forced upon the shaft.

Claim.—The improved roller, made substantially as described.

No. 34,143.—E. C. HAMLIN, of Pavilion, N. Y.—*Improvement in Car Coupling.*—Patent dated January 14, 1862.—The object of the adjusting circle is to allow the link to spring either way on the pin *p* as a fulcrum without cramping the points of the adjuster, in case the link is pressed in either way, on a curve or in backing; the yoke *y* serves to prevent the jaw A from opening except when a car is to be coupled or uncoupled.

Claim.—The employment in self-couplers for cars of a link with a circular head and slot, as described, in combination with the adjusting circle C and follower F. Also the combination and arrangement of the adjustable clamping yoke *y* and pin *p* with the lever R and pawl *r*, as and for the purposes specified.

No. 34,144.—ADAM HAWVER and W. H. HANYEN, of Galva, Ill.—*Improved Churn and Butter Worker.*—Patent dated January 14, 1862.—The dasher is arranged to work over an inclined bottom and in connexion with a concave at its lower end, whereby the cream is kept constantly agitated and subjected to a great amount of friction.

Claim.—The dasher D, staff E, concave C, inclined bottom B, partition *c d*, circular flange *e*, and section *g*, when combined, arranged, and operating in the manner and for the purpose set forth.

No. 34,145.—JOSIAH HAYDEN, of Columbus, Ohio.—*Improvement in Water Elevators.*—Patent dated January 14, 1862.—This invention relates to the construction of the bucket, the mode of tipping, the construction of the chain and windlass wheel, and the devices for changing the direction of the windlass wheel without reversing the direction of the crank.

Claim.—The special arrangement of the shifting gears N P in combination with the windlass wheel K, flat chain L, bucket E, pin G, and bail C, when these parts are arranged and operated in the manner and for the purposes set forth.

No. 34,146.—JAMES JENKINS, of Elizabeth, N. J., and GEORGE H. COOK, of New Brunswick, N. J.—*Improved Method of Working Silicious and other Calamine Ores of Zinc.*—Patent dated January 14, 1862.—The claim explains the nature of this invention.

Claim.—The use of oxide of iron, iron ore, lime, or limestone or other basic substance, either separately or mixed, as a flux or fluxes, for separating the silica and other earthy impurities from the zinc contained in the silicious and other calamine ores of this metal, in the manner substantially as set forth, these ores being first prepared for working in the common way.

No. 34,147.—HENRY ISHAM, of New Britain, Conn.—*Improvement in Water Metres.*—Patent dated January 14, 1862.—This invention consists in combining two or more metres by a compound valve operated by the force of the current of water so that the water to be discharged shall be directed to and made to pass through that meter which bears the nearest relation in capacity to the size of the stream of water discharged.

Claim.—Combining two or more water metres, substantially as described, by means of a compound valve, or the equivalent thereof, substantially as described, and operated by the force of the passing water, as set forth.

No. 34,148.—ROBERT A. HOOE, of Washington, D. C.—*Improvement in Tobacco Pipes.*—Patent dated January 14, 1862.—The engravings and claim explain the nature of this invention.

Claim.—Making the body of a pipe of three main divisions, to wit, a removable tobacco chamber having a perforated metallic base and metal sides; a smoke-circulating chamber, and a saliva reservoir opening from below, the whole being constructed, arranged, and combined substantially in the manner and for the purpose described.

Also, the main division A in combination with the main division B, the two divisions being united in the manner and for the purpose described.

No. 34,149.—CHARLES LEAVITT, of Cleveland, Ohio.—*Improvement in Carriage Wheels.*—Patent dated January 14, 1862.—The object of this invention is to secure the largest number possible of spokes upon the hub, and requisite degree of disk and to remedy any looseness caused by shrinkage of the spokes by screwing up the nut that holds the parts together. Each spoke has a bearing upon the pipe box.

Claim.—So dividing the two parts of the hub F and G into alternate depressions and projections, having their longitudinal faces bounded by radial lines from the centre of the axle, and filling the alternate spaces *a'* and *e* with spokes, in such a manner that each spoke shall have in part a metallic bearing upon each side, filling the entire space with spokes, as described, in combination with the concave face of F and the convex face of G, the nut H, and cap K, operating as and for the purpose set forth.

No. 34,150.—JAMES LEFFEL, of Springfield, Ohio.—*Improved Water-Wheel.*—Patent dated January 14, 1862.—The invention consists in so constructing the valve gates and combining them with the buckets as that when a small quantity of water is used it is caused to impinge against the bucket of the wheel at its outer or greatest diameter, whereby the greatest amount of leverage is obtained. The valves are made adjustable for admission of more or less water, as may be necessary.

Claim.—First, the combination of the parts B, C, and D with the buckets *a* and *b*, arranged in relation to each other as and for the purposes set forth.

Second, the combination and arrangement of the parts mentioned in the above claim with the valves or gates H and the wheel casing E, composed of the parts F, G, and E', substantially as described.

Third, the combination of the wheel A, as seen in Figs. 2, 3, 4, and 5, with its casing, valves, and the means for operating the same, as seen in Figs. 1 and 2, when said parts are constructed and arranged to operate in relation to each other, as set forth.

No. 34,151.—RICHARD F. LOPER, of Philadelphia, Pa.—*Improved Means for Covering and Repairing Iron Ships and other Navigable Vessels.*—Patent dated January 14, 1862.—The object of this invention is to utilize old iron vessels that have become leaky and unsafe by wear or rust.

Claim.—The planking of old iron boats or second-hand vessels, as set forth, whereby a safe and good vessel or boat can be made out of any iron vessel or boat after the iron has become thin by wear or rust, as described.

No. 34,152.—J. W. MACKINTIRE, of Woburn, Mass.—*Improvement in Stalls for Horses.*—Patent dated January 14, 1862.—This invention consists in arranging the stall so that the head of the horse shall face the middle of the floor or passage-way. The V-shaped rack is placed in the door and hinged at the lower part, so as to be thrown forward or back as desired.

Claim.—My improved stall, as constructed with the opening B, the door C, and the rack E, applied and made to operate together, substantially in the manner set forth.

Also, the V-shaped rack, arranged and made to operate in the manner set forth.

No. 34,153.—BENJAMIN A. MASON, of Newport, R. I.—*Improvement in Casting Projectiles for Fire-arms.*—Patent dated January 14, 1862.—The object of this invention is to form by pressure that kind of projectile known as the Minie ball.

Claim.—The reciprocating dies and plunger, substantially as described, in combination with the hopper, provided with the spring stops or equivalent means for holding up the slug of lead until it is acted upon by the plunger, as set forth.

No. 34,154.—ROBERT MCCAIN, of Rootstown, Ohio.—*Improvement in Feed-Cutters.*—Patent dated January 14, 1862.—A detachable tin box is placed on the top of the feeding box, with the bottom inclined downwards towards the rollers, for the purpose of conveying the broken or finer material to the knife.

Claim.—The detachable box Y, in combination with the feed and cutting apparatus, arranged as and for the purpose set forth.

No. 34,155.—THOMAS MCDONOUGH, of Middletown, Conn.—*Improved Hot-air Engine.*—Patent dated January 14, 1862.—The invention consists in the employment of the plunger as a cylinder and a chamber to contain the wires that take up the heat, while it also does the usual duty of the plunger in air engines.

Claim.—First, a plunger, containing a piston and chamber, and moving through a fixed packing ring, substantially as described.

Second, the bowl D, upon the end of the plunger, substantially as described.

Third, the connexion of the piston and fly-wheels by side rods, in combination with the open plunger, substantially as described.

No. 34,156.—MARVIN MEAD, of Bedford, Mich.—*Improvement in Tire-upsetting Machine.*—Patent dated January 14, 1862.—The arms B B and levers E E being first opened, the heated tire is placed between the concave clamp F F and points *i i*, and the anvil G adjusted in proper position. The levers E E are then drawn together, causing the tire to be clamped and upset.

Claim.—The employment of the concave adjustable clamps F F, when arranged and used with the arms B B, the levers D E, the connecting rods C C, and rest G, the clamps being connected to the levers D by means of a ball joint, and their ends being formed so as to lap or joint on the outside of the tire, and for the purpose specified.

No. 34,157.—MARTIN METCALF, of Grand Rapids, Mich.—*Improvement in Comb Frames for Bee-Hives.*—Patent dated January 14, 1862.—The engravings and claim explain the invention, the object being the easy removal of the frame, to avoid irritating the bees during the operation.

Claim.—Constructing the top bar A and side bars B of adjustable frames for bee-hives with the bevelled ends *a b* in the manner described, when used in connexion with a movable front, and in a rectangular box or hive.

No. 34,158.—FREEDOM MONROE, of Romeo, Mich.—*Improvement in Machines for Filling Wagon-Ruts on Highways.*—Patent dated January 14, 1862.—The invention consists in attaching scrapers to a frame between the forward and hind wheels of a common two-horse wagon, the former ends of the scrapers being so arranged as to fill the rut immediately after the wheel.

Claim.—The frame-work which stands upon the ground, the posts each side, the bench and wheels on top, the post and lever, the pulley and cord, the platform, the driver's seat, and the post passing up through the same, the hooks, band, and straps round the axletree, in combination.

No. 34,159.—WILLIAM MORRHOUSE, of Buffalo, N. Y.—*Improvement in Spoke-tenon Augers.*—Patent dated January 14, 1862.—This invention has for its object the adaptation of a single spoke-tenon auger to the capacity for work of several augers of a like character, but of different sizes, or which is capable of cutting different sized tenons.

Claim.—First, a centre-sliding plug, which performs the double function of centring and gauging the varying sizes of tenons.

Second, a graduated centre-sliding plug, in combination with a tubular sleeve, a compressible spring, and a surrounding tubular socket.

Third, a tubular sleeve, carrying a centring pin, in combination with a compressible spring, a steady pin, and a surrounding socket, substantially as described.

Fourth, knife blocks and guide blocks, having scolloped inner ends, as described, in combination with a graduated centre-sliding plug and tubular sleeve, as described.

Fifth, making the shank C and steady pin *f* in one piece, and confined to the socket A by an intermediate screw body, which forms shoulders for one end of the socket and one end of the spring to abut against.

No. 34,160.—CHARLES MONSON, of New Haven, Connecticut.—*Improved Extension Table.*—Patent dated January 14, 1862.—The leaf B is constructed in the form of a box inverted and placed between the two ends *a a* and parallel to the leaf A. The two leaves are connected together and to the stand C by two sets of parallel levers, by which the leaves are made to assume the desired position.

Claim.—The improved extension table, as constructed with two leaves A B, combined with the stand C, by means, and so as to operate substantially as specified.

Also, in combination with the leaves and stand, when made and applied together, as described, the finishing bars or strips F F to be arranged in manner and for the purpose, substantially as set forth.

No. 34,161.—FRANCIS MURGATROYD, of Cleveland, Ohio.—*Improvement in Oscillating Steam Engines.*—Patent dated January 14, 1862.—This invention consists in constructing and applying a reversible disk valve and seat to steam engines, which will open two ports to steam and two to exhaust at the same time, forming a more effectual opening for steam to the piston and a more free exhaust.

Claim.—First, the combination of the openings *s s* and *s s* so as to open two ports to steam and two to exhaust at the same time.

Second, the valve figure 7, in combination with the reversing lever O', by means of which the engine can be reversed at pleasure, as specified.

No. 34,162.—CHARLES NEER, of Albany, N. Y.—*Improvement in Metallic Blinds for Windows.*—Patent dated January 14, 1862.—This invention relates to a metallic strip for receiving the tenons of the blind when applied to and combined with a metallic frame, also to the construction of metallic slats applied to said frame and the manner of fastening the slats.

Claim.—First, the stripe *c*, bent or folded, as shown, and applied to the iron blind frame, composed of the vertical stiles *a a*, united to each other by the cross bars or rails *b b*, the parts receiving the tenons of the blind slats, as set forth.

Second, the metallic slats *c c*, attached at their lower corners and provided with the disk 5 and spring 6, for the purposes and as set forth.

Third, the bars *h*, hinged to the blind frame, as set forth, so that they can be turned against the slats to keep them shut, as specified.

No. 34,163.—A. M. PENISTON, of Wellington, Missouri.—*Improvement in Seeding Machines.*—Patent dated January 14, 1862.—The rock shaft is made to operate the ball valves so as to open or shut off the supply of seed in the conductors, so that seed may be deposited in hills or drills as desired.

Claim.—The arrangement and combination with a seed planter, substantially such as described, of the rock shaft *o p p*, plug or ball valves *q q*, lever *r*, with a curved slot *u*, and the sliding clutch *v*, as and for the purposes set forth.

No. 34,164.—WM. S. SAMPSON, of New York, N. Y.—*Improvement in Grain Bins.*—Patent dated January 14, 1862.—The object of this invention is to utilize the entire space of and obtain great strength in grain bins, when constructed as stated in the claim.

Claim.—Forming the bins of a granary for storing grain in bulk of alternate cylindrical chambers, and chambers formed partly of flat walls and partly of portions of each of the contiguous cylinders, substantially in the manner and for the purpose as set forth.

No. 34,165.—JOHN B. SARDY, of New York, N. Y.—*Improved Construction of Ships-of-War and other Navigable Vessels.*—Patent dated January 14, 1862.—The object of this invention is to obtain carrying capacity sufficient for the battery and for machinery powerful enough to obtain high speed and sufficient supply of coal without so great a draught of water as to render it impracticable for the vessel to enter most bays, harbors, or other inland waters, and also so to construct the prow that it may serve as a battering ram.

Claim.—Tthe combination of two or more stern posts *a a*, two or more keels *d d*, and two or more propellers *h h*, or other motors revolving in the same vertical plane, constructed and operating in the manner and for the purpose described, in order that greater buoyancy, speed, and capacity may be obtained.

Also, the combination of the central keel *e*, with keels *d d*, and propellers *h h*, and inclined runs *b b*, substantially as specified.

Also, the pointed prow, tapered in all directions, when used in a hull, as before described

No. 34,166.—JOHN SCHAFFER and EDWARD SPENCER, of St. Louis, Mo.—*Improved Hand Printing Press.*—Patent dated January 14, 1862.—The object of this invention is to print the usual stamp on the back of railroad tickets or coupons, with the face of the ticket turned upwards, and at the same time make a row of perforations between the tickets when a number of them are printed together on one strip of paper, so that they may be more readily torn apart.

Claim.—Making a hand stamping press, substantially in the manner described, so as to stamp and perforate the ticket, ink the form, and supply the ink to the inking roller, in a single operation, substantially in the manner set forth.

No. 34,167.—J. A. SCHNEIDER, of Cleveland, Ohio.—*Improvement in Truss Pads.*—Patent dated January 14, 1862.—The engraving and claim explain the nature of this invention, the object being ease of adjustment while the apparatus is worn.

Claim.—A truss, consisting of a slotted pad N, a pad plate, made of a slotted part G, and a part G′, in combination with a sliding piece C, hinge J J, and spiral spring F, when the parts are arranged in relation to each other, as set forth.

Also, a pad plate, made in two parts G G′, the part G being adjustable so as to cause the pad attached to the pad plate to bear obliquely, as set forth.

No. 34,168.—H. C. SMALL, of East Limington, Maine.—*Combined Writing Case and Checker-Board.*—Patent dated January 14, 1862.—The object of this invention is to combine a writing case and checker-board in such manner that the latter shall occupy but comparatively little room in the former, which, besides, has apartments for pens, ink, postage stamps, and checkers in one part, and for envelopes, penholders, and pencil in another part; the checker-board, when removed from the writing case, answering either for games or for a writing desk, and the whole, when packed, brought into such small compass as to be carried in a soldier's knapsack or pocket without inconvenience.

Claim.—The checker-board, made of strips of wood, or other suitable material, attached together in the manner described, in combination with the writing case, the whole together constituting a new article of manufacture.

No. 34,169.—DANIEL C. SMITH, of Adrian, Mich.—*Improvement in Stump Extractors.*—Patent dated January 14, 1862.—The invention consists in the combination with a lever of a tackle and shoe mounted on two wheels, and an axle, in such a manner that the whole weight of the machine may be thrown on or off the wheels at pleasure.

Claim.—First, the combination with a tackle, block, and rope of a beam A, with a shoe B and shoe D attached thereto, the whole being mounted on two wheels and axle, as described, for the purposes set forth and described.

Second, the combination of the shivers F F F, for the purpose of allowing the team to draw at any angle, as described.

Third, the combination with the chain 1 1, of the windlass 9, drum 8, rope 7, windlass X, crank Z, and pawl Y, for the purposes set forth and described.

No. 34,170.—JOHN TAGGART, of Roxbury, Mass.—*Improvement in Pegging Machines.*—Patent dated January 14, 1862.—The object of this invention is to prevent the breakage of the peg, and obviate the failure to drive it into the hole for its reception by the rebounding of the hammer while the shoe is in motion. By means of the lasting mechanism, a shoe may be lasted and prepared ready for having an outer sole pegged to it.

Claim.—The combination of the back-latching mechanism, or stud *l* and spring catch *m*, and its unlatching mechanism, or lever *h* and cord *o*, with the hammer and the peg-driver.

Also, improved lasting mechanism, having its parts constructed and applied in manner as set forth, and so as to operate together, as described.

Also, the combination of the eccentrics *b2*, the lever *c2*, and their pitmen *y z*, as applied to the shaft *c2*, and each side of the lasting block, and its heel and toe clamps, as described.

No. 34,171.—NICHOLAS TALIAFERRO, of Augusta, Ky.—*Improvement in Revolving Ordnance.*—Patent dated January 14, 1862.—The front cheek is recessed to afford facility for loading and swabbing. A steel brush or ferule is adapted to be screwed into the enlarged rear end of the bore so as to be replaced by a new one whenever necessary, by which means a constantly gas-tight joint at the breech is maintained. The water serves to cool the breech, and may be applied to the inside or outside of the cheeks.

Claim.—First, the arrangement of recessed front cheek I I I *i i′*, rear cheek M, revolving breech N O R, and dovetailed bearing P Q, the whole being combined and operating substantially as set forth.

Second, the screw-threaded bush V, adapted for insertion within, and removal from, the rear end of the bore of a breech-loading cannon, in the manner and for the object stated.

Third, supporting a cannon upon a downwardly projecting ball trunnion G, confined within a socket D, and resting upon an adjustable step E, all substantially as shown and explained.

Fourth, the described application of water pan W, inclosing the lower portion of the revolving breech N O R, as set forth.

No. 34,172.—SETH D. TRIPP, of Stoneham, Mass.—*Improvement in Machines for Cutting Welts for Boots and Shoes.*—Patent dated January 14, 1862.—This invention has for its object cutting welts for boots and shoes, which will automatically adjust its cutter so that the leather strips which are of rectangular form, or nearly so, will be cut precisely through the centre and in an oblique direction; the cutter being so operated as to conform to the different thickness of the leather strip to be cut, and the varying thickness of each individual strip, so that the two pieces which are formed of each strip will correspond precisely in thickness, whatever the thickness of the strip may be.

Claim.—First, the employment or use, in connexion with the feed rollers C D, of a cutter L, arranged and connected with the yielding roller D, in such manner as to be turned or adjusted automatically by the yielding movement of said roller, substantially as and for the purpose set forth.

Second, forming the cutting edge of the cutter L, by means of the basils *f f′ f″*, which are respectively above, below, and at both sides of the cutter, as and for the purpose specified.

Third, having the shaft E of the lower roller D fitted in a tube F, which is connected by a bar *d*, with a rock shaft G, and acted upon by a spring H, when said parts are used in connexion with the cutter L, connected with the shaft G, and all arranged as and for the purpose set forth.

No. 34,173.—J. E. VAN WINKLE and JOSHUA MASON, of Patterson, N. J.—*Improvement in Water Meters.*—Patent dated January 14, 1862.—The axis constitutes a valve for the induction and eduction of the liquid to and from the measuring chambers. It contains a partition dividing the inlet from the outlet passages. On the inlet side of the partition in the upper part of the axis there are two ports, and on the outlet side two similar ports. Two ports of similar size and form are placed in the socket, and communicate with each measuring chamber. The oscillation of the box communicates motion to the registering apparatus.

Claim.—The combination of the stationary, partitioned, slotted, hollow receiving and discharging axis B, with the oscillating water box A, substantially in the manner shown and described, so that the water will enter, operate, and be discharged from the compartments of said box, through the said axis, all as set forth. The combination of the air-connecting pipe D with the compartments *a a′*, substantially as and for the purpose shown and described.

No. 34,174.—C. P. S. WARDWELL, of Lake Village, N. H.—*Improved Planing Machine.*—Patent dated January 14, 1862.—The bed plates are hinged to the bed frame, and, with the gauges, support, gauge the position, shape, and thickness of, and deliver to the cutter head the clapboards for dressing, edging, and planing. Adjustable saws are mounted on an arbor, by which the thick edges of the clapboards are jointed or edged, and cutters, placed immediately behind the saws, serve to smooth the straightened edges of the clapboards. Serrated wheels project up through the bed plates, and serve to keep the clapboards in line and position. Two delivery bars, having inclined projections, are so arranged as to raise or lower the edges of the bed plates, as desired. The curved plates, with their connexions, serve to keep the splinters and shavings pressed down, and hold the clapboards steadily down upon the bed plates.

Claim.—The hinged bed plates L L, arranged and operating substantially in the manner and for the purposes specified.

Also, the gauges D D, adjustable on and in combination with the bed plates L L, substantially as described.

Also, the combination of the adjustable edging saws G G with the hinged bed plates L L and adjustable gauges D D, substantially as and for the purpose set forth.

Also, the combination of the vertically adjustable bed E and hinged bed plates L L with the cutter head W, substantially as specified.

Also, the combination of the doubly adjustable guides A A with the hinged bed plates L L, adjustable edging saws G G, and gauges D D, substantially as set forth.

Also, the combination of the smoothing cutters S S, on the gauges D D, with the edging saws G G, for the purpose set forth.

Also, the obliquely situated serrated wheels R R, whether acting in connexion with or in the place of the rollers Q Q, in combination with the gauges D D, arranged and operating substantially as and for the purpose specified.

Also, the combination and arrangement of the sliding bars O O and their inclined projections *n n*, and connecting lever P with the inclined projections *o o*, on the bottom of the hinged bed plates L L, operating substantially as and for the purpose set forth.

Also, the combination of the two curved pressure and fender plates V X, mounted respectively on hinged arms *r r* and *w w*, and drawn down by springs *v v* with the cutter head W, substantially as specified.

No. 34,175.—DYER WILLIAMS, of Syracuse, N. Y.—*Improvement in Locomotive Axles.*—Patent dated January 14, 1862.—The invention consists in forming the axle in separate pieces, and forging the crank arms and wrists separately, the crank arms being shrunk or pressed upon the parts of the axle which are shouldered to fit them, and the wrists being similarly connected to the outer ends of the crank arms.

Claim.—The improvement of locomotive engines by the employment of a crank axle, constructed in the manner and for the purposes set forth.

No. 34,176.—W. W. WILSON, of Collins Station, Ill.—*Improvement in Corn Planters.*—Patent dated January 14, 1862.—This invention relates to that class of machines which form the furrow, deposit the seed and cover it at one operation, and it consists in an arrangement of seed, distributing devices, and adjustable ploughs, whereby the implement is made to work with accuracy, and adapted to plant to any desired depth.

Claim.—The distributing wheels E, cups *f*, hoppers F G, frames *g*, rods *a*, conducting tubes *b*, adjustable ploughs I, standards J J, guides *c*, and double brackets *d*, with the frame of the machine, when combined, arranged, and operating in the manner described.

C, with each other, substantially as and for the purpose set forth.

No. 34,177.—JOHN F. WINSLOW, of Troy, N. Y.—*Improved Machine for Compressing Puddle Balls.*—Patent dated January 14, 1862.—The invention consists in upsetting a bloom or blooms of iron at the ends thereof, while being worked by two rollers and a cam or eccentric, by means of a bar or hammer moving horizontally in connexion with a steam cylinder, combined with a cam or eccentric wheel.

Claim.—The combination of the steam cylinder F, the ram or hammer R, the cam wheel

No. 34,178.—ALFRED M. BAILEY and JOHN O. COUCH, assignors to the METROPOLITAN WASHING MACHINE COMPANY, of Middlefield, Conn.—*Improved Clothes Wringer.*—Patent dated January 14, 1862.—The invention consists in so constructing and arranging the springs and stop that when the machine is acting upon thick masses of clothing it may not disengage its gear wheels one from the other, while it may still render available the effect of the whole or a portion of its springs.

Claim.—In clothes-wringing machines, having rollers A B geared together at one end by gear wheels M N, constructing and arranging the spring or springs and the stop H, or its equivalent, substantially as and for the purposes set forth.

No. 34,179.—JOHN W. BARKER and JAMES P. HASKIN, of Syracuse, N. Y.—*Improvement in Purifying Common Salt.*—Patent dated January 14, 1862.—The claim explains the nature and object of the invention.

Claim.—The mode of decomposing the impurities in common salt by immersing or washing it in a solution of any one or more of the carbonates of ammonia, or of any one or more of the sulphates of potash, soda, or ammonia, or of any combination of any of the above-named salts in saturated brine, as set forth, through which means the chemical results stated are produced.

No. 34,180.—RALPH EMERSON, Jr., and F. GRAHAM, assignors to RALPH EMERSON, Jr., of Rockford, Ill.—*Improvement in Mowing Machines.*—Patent dated January 14, 1862.—The invention consists in a combination of devices explained by the engravings and claim.

Claim.—The combination of the bent axle *c* and hand lever G with the arm F and bracket *f*, when arranged for joint operation relatively to each other and to the machine, substantially in the manner described for the purpose set forth.

No. 34,181.—RALPH EMERSON, Jr., and F. GRAHAM, assignors to RALPH EMERSON, Jr., of Rockford, Ill.—*Improvement in Harvesters.*—Patent dated January 14, 1862.—The invention consists in a combination of devices arranged for joint operation, and also in the construction of a finger beam which shall permit the guard fingers to be readily fastened to or removed from it, and, while in place, to be securely retained.

Claim.—The combination of the gearing frame, finger, beam, shoe, and drag strap with the lifting lever F and detent standard G, when the whole are arranged for joint operation, substantially in the manner described, for the purpose set forth.

Also, constructing the finger beam of a single sheet of metal bent near its centre into a U-shape, so that the upper part shall project beyond the lower a sufficient distance to form a ledge to which the guard fingers may be secured, substantially in the manner described

Also, fastening the guards to the upper part only of the finger beam, bent as described, in combination with the shoulders upon the shanks of the fingers, substantially in the manner described.

No. 34,182.—MARKS FISHEL, assignor to Himself, ADOLPH OPPER, and LEO POPPER, of New York, N. Y.—*Improvement in Skeleton Skirts.*—Patent dated January 14, 1862.—The engravings and claim explain the nature and object of this invention.

Claim.—Securing the hoops A A to the tapes B B by means of fastenings D, or their equivalents, passing through the eyelets C C and across a portion of the tape between them, substantially as and for the purposes set forth.

No. 34,183.—J. H. LENVILLE, assignor to Himself and L. J. PIPER, of Altoona, Pa.—*Improvement in Iron Truss Bridges.*—Patent dated January 14, 1862.—This invention consists in the construction of the lower chords and the mode of applying the same in combination with the posts and other parts of the truss, and also in the method of constructing the posts of wrought and cast iron.

Claim.—First, the construction of the lower chords of truss bridges of series of wide and thin drilled eye bars C C applied on edge between ribs S S on the bottoms of the posts and connected by pins P P, supported in the diagonal tension braces D D and E, all substantially as described.

Second, the posts O A L O A L, composed each of two wrought-iron plates or bars *a a*, distance pieces *b b*, and rivets J J, or their equivalents, and cast-iron braces L L, and capitals O O, the whole combined as specified.

No. 34,184.—MARCUS P. NORTON, assignor to Himself and CHARLES EDDY & CO., of Troy, N. Y.—*Improved Hand Stamp for Post Offices.*—Patent dated January 14, 1862.—The engraving and claim explain the nature of this invention.

Claim.—The combination of four cylinders *a b c d*, upon the shaft C, with the stationary form of type D D, whereby the day, month, and year are given together by one impression, substantially as described and set forth.

Also, the combination of the shaft C with four cylinders *a b c d* thereon arranged, with the frame B, whereby the said cylinders are firmly held in their adjusted position, substantially as described and set forth.

No. 34,185.—ALLEN WALTON and JOHN L. KITE, assignors to ALLEN WALTON, of Philadelphia, Pa.—*Improvement in Process of Manufacturing Illuminating Gas.*—Patent dated January 14, 1862.—The object of the invention is to abstract from the gas the superfluity of carbon and other impurities, so as to render it more fit for illuminating purposes.

Claim.—Injecting a steady and continuous stream of air into a retort in which gas is generated from coal-oil, or its equivalent, as and for the purpose set forth.

No. 34,186.—JOHN POWERS and E. M. SMITH, assignors to J. S. MITCHELL, of New York, N. Y.—*Improvement in Harvesters.*—Patent dated January 14, 1862.—The object of the devices under the first claim is to allow the finger bar and sickle to conform to the irregularities of the surface of the ground, and also to be raised bodily so as to pass over obstructions or turned entirely out of the way when the machine is drawn from place to place. The second and third claims, with the engravings, explain themselves.

Claim.—First, the attaching of the finger bar A to the main frame G of the machine by means of the bars D D connected by joints *a a* to the upright sliding bars F F on the main frame G, substantially as and for the purposes set forth.

Second, the use of guard finger having backs *h* and edges *k k* extending continuously along the bar so as to present closed surfaces in front and beneath, and formed with channels or grooves *i* extending beneath the sickle bar and partially around the bolt holes *l*, and open at back to permit the ready escape of moisture, dirt, gum, or trash which may work underneath the sickle bar.

Third, having the bar N, which forms a portion of the lifting or elevating mechanism of the finger bar A, fitted loosely underneath the main frame H, to admit of longitudinal play of said bar for the purpose of allowing the finger bar to be turned up against the main frame, as set forth.

No. 34,187.—T. C. ANDREWS, of Leverington, Pa.—*Improvement in Tobacco Pipes.*—Patent dated January 21, 1862.—The object of this invention is to admit of the ready detachment of the perforated holder, for the purpose of cleansing both holder and bowl.

Claim.—The tobacco holder C, with its perforated base and the flange *e*, or its equivalent, when applied to the bowl of a pipe, and serving as a detachable lining for the same, as and for the purpose set forth.

No. 34,188.—LEWIS BAIRD, of Cambridge, Mass.—*Improved Mode of Preventing Incrustation in Steam Boilers.*—Patent dated January 21, 1862.—The claim explains the nature and object of this invention.

Claim.—The employment of tobacco, or a decoction or extract of the same, for the purpose of preventing the incrustation of steam boilers, or of removing the scale therefrom.

No. 34,189.—JOHN E. BALDERSTON, of Philadelphia, Pa.—*Improved Splicing Bar for Axles.*—Patent dated January 21, 1862.—This invention consists of a bar having a journal, on which a wheel may be hung, so constructed as to be readily and securely attached to an axle which may become broken at the middle or one end.

Claim.—The splicing bar A with its journal *b* and the strap bolts *c c*, the whole being constructed and arranged for application to a broken axle, as and for the purpose set forth.

No. 34,190.—M. W. BALDWIN, of Philadelphia, Pa.—*Improved Rotary Engine.*—Patent dated January 21, 1862.—This invention consists in the employment of a flexible fabric in combination with rollers, so arranged that a continuous diaphragm of the flexible fabric is interposed between a metallic disk and rollers attached to radial arms, which latter are attached to the shaft.

Claim.—The flexible diaphragm and disk, in combination with the rollers, whereby, by the action of steam or other fluids between the diaphragm and disk, the rollers are propelled n the manner described.

No. 34,191.—CHARLES BEIDLER, of Allentown, Pa.—*Improvement in Ploughs.*—Patent dated January 21, 1862.—This invention consists in the means of securing the nose or point, mould-board, and landside together by one nut, so that the nose and share may be readily attached to and detached from the plough, and new ones substituted when required.

Claim.—Attaching the nose F to the plough by means of the screw bolt *c* passing through the projections *a b* of the landside and mould-board, and provided with the collar *f* and share brace *g*; all arranged as and for the purpose set forth.

No. 34,192.—MAGNUS BENAS, of New York, N. Y.—*Improved Tanning Composition.*—Patent dated January 21, 1862.—The nature of this invention is set forth in the claim.

Claim.—The employment or use for tanning purposes of a decoction of rhatany, tormentilla, and granadilla roots, in connexion with cinchona and cascarilla barks, substantially in the proportions specified, and using said solution with Bombay catechu, alum, and common salt, in the proportions about as specified, and substantially as described.

No. 34,193.—THOMAS BLANCHARD, of Boston, Mass.—*Improved Scoop Shovel.*—Patent dated January 21, 1862.—This shovel is designed to take the place of the ordinary wooden scoop, as well as those constructed with sheet metal bowls, as combining strength and lightness with greater capacity.

Claim.—A scoop shovel, with a bent rim or side B, having a handle A and bottom E attached to it, constructed substantially as shown and described.

No. 34,194.—JAMES F. BROOKS, of Stafford Springs, Conn.—*Improvement in Road Scrapers.*—Patent dated January 21, 1862.—The object of this invention is to obtain a road scraper which will admit of being so adjusted as to scrape the dirt or earth to either side of it, or to scrape the earth up and carry it in front for short distances, and also be capable of adjustment, so as to compress the earth and level it where desired.

Claim.—First, the attaching of the scraper C to the frame A of the machine, substantially as shown, to admit of the scraper being adjusted in a more or less inclined position, for the purpose specified.

Second, attaching the draught pole B to the frame A, in the manner substantially as shown, to admit of the pole being adjusted either at right angles with the scraper or obliquely therewith, for the purpose set forth.

Third, the combination of the adjustable scraper C and draught pole B, arranged for joint operation, as and for the purpose described.

No. 34,195.—JOHN BULLARD, of Stockbridge, Vt.—*Improvement in Apparatus for Distilling Coal Oil.*—Patent dated January 21, 1862.—This invention relates to that class of retorts in which the heat to effect distillation is derived from the slow burning away of the charge towards the outlet, and consists in so constructing and arranging the retort as to obtain a draught along the bottom and obliquely downward to the lowest point in the retort throughout the whole of the charge. It also consists in the introduction of steam into and through the bottom of the retort to heat it before firing, and to prevent the vapors condensing in the kiln and being burnt therein. Also, in the means of obtaining a draught through the kiln, serving at the same time as a means of condensation of the vapors.

Claim.—An egg-shaped retort, arranged substantially as described, with draught opening at its lower end, so that the unburned contents of the retort will always be within the lines of the draft, all as set forth.

Second, in a retort in which the distillation is effected by the gradual burning away of the charge toward the outlet, the introduction of steam into and through the bottom, substantially as and for the purpose specified.

Third, the combination with the outlet of the retort of a still which has its interior pipes provided with a cold water injection, as and for the purpose shown and described.

No. 34,196.—ALFRED BURCHARD, of Sylvan, Mich.—*Improvement in Iron Cutters or Sleighs.*—Patent dated January 21, 1862.—This invention consists in the use of wrought iron and steel combined, and connected by means of bolts or nuts, in making the running part of a sleigh or cutter; the bolts passing through the runner are made larger at the bottom than the top, so as to pass through the runner in a tapering form.

Claim.—The construction and use of wrought iron or steel braces, supports, bolts, and nuts, when used and in combination with the running parts of sleighs or cutters made exclusively of wrought iron or steel, in the manner and form and for the purposes as described.

No. 34,197.—L. D. COWLES, of Armada, Mich.—*Improvement in Carriages.*—Patent dated January 21, 1862.—This invention consists in the construction and arrangement of springs of an ordinary two-wheeled carriage, whereby the lateral and jarring motion of the same, caused by one of the wheels striking against an obstruction in the road or dropping into a rut is neutralised, and a gentle and easy motion given to the carriage.

Claim.—First, the combination of the springs E G, attached to the axle of a two-wheeled carriage by means of a rolling joint *e f*, with the stationary spring F, when arranged and operating in the manner set forth.

Second, the combination of the volute springs H J with the rolling springs E G and stationary spring F, when arranged in the manner described.

No. 34,198.—JOSEPH H. CONNELLY and JAMES W. PHILLIPS, of Wheeling, Va.—*Improved Steam Boiler Furnace.*—Patent dated January 21, 1862.—This invention consists in the addition of an outside furnace for the purpose of coking the fuel for the main furnace or fire-box. After being properly coked it is pushed back in order to keep up a clear white heat at that point over which the smoke must pass, and where the oil and steam enters. Petroleum or well oil is forced into the inside furnace or fire-box with a jet of steam, where wood, coal, or other fuel is used for the purpose of effecting the combustion of the gases and economizing the fuel.

Claim.—First, the introduction of petroleum, or well oil, into the furnace of steam boilers by means of the steam jet or pipes, for the purpose of facilitating the combustion of the gases of the fuel, whether wood or coal.

Second, the side furnace *a*, in connexion with the boiler *b*, reservoir *d*, steam pipes *c*, and oil pipes *e*, constructed and arranged substantially as and for the purposes specified.

No. 34,199.—ALANSON CARY, of Worcester, Mass.—*Improvement in Starting Apparatus for Horse Railroad Cars.*—Patent dated January 21, 1862.—The object of this invention is to remedy the difficulty of starting a car which may be heavily laden, or when the horses are inclined to be fractious. The apparatus used for the purpose may be operated by the driver, and consists of ratchet wheels attached to the axle-tree or one of the wheels, and two dog levers provided with dogs or moving pawls, operated by levers connected with a hand crank, which, on being turned by the driver, imparts a reciprocating motion to the levers. To avoid

clicking of the hooks on the ratchet wheel while the car is in motion, a cam is fastened to the side of the wheel which comes under projections on the dogs and forces them back clear of the ratchet teeth.

Claim.—First, the combination with one of the wheels on the axle-tree of a rail car of a ratchet wheel E, or its equivalent, and two dog levers F F′, provided with dogs or moving pawls, substantially as and for the purposes set forth.

Second, the combination of a ratchet wheel or device fast to one of the wheels of a rail car, as set forth and a suitable pawl device suspended so as to be free to vibrate or oscillate around the axis of said wheel, with suitable mechanism so constructed and combined with the body and platform of the car as to enable the driver to start the car while attending to his team at the front of the car, for the purposes set forth.

Third, the peculiar construction and relative arrangement of the dog levers F F′, whereby the pawls and stop devices are well protected by their flanges *d d′*, and whereby one is made to fit and work against the other like a rule joint, and operating levers G G′ are brought one over the other, as shown.

Fourth, operating the dog levers F F′, by means of the hand crank L, at the front of the car, substantially as shown and described.

Fifth, the mode of throwing the operating dogs in and out of action with the ratchet teeth, substantially as described.

Sixth, forming the operating dogs *e e*, in the peculiar manner set forth, and as shown in figure 6.

Seventh, the combination of the dog levers F F′, with the tubular projection C′, of box C, whereby all friction and wear of the parts, when the starting device is not in operation, is avoided, as described.

Eighth, the combination of the tubular brake shaft K, with its hand crank L′, and hand crank L, with its central shaft, with the fender board on front of the car, substantially as described.

No. 34,200.—JOHN DUKE, of Milesburg, Pa.—*Improved Roofing.*—Patent dated January 21, 1862.—This invention consists in forming a composition of gas or coal tar, fine gravel and sand and plaster, which, when prepared, is spread upon a roof formed by covering the rafters with boards of different thickness succeeding each other alternately.

Claim.—A roof constructed in the manner and of the materials as set forth.

No. 34,201.—M. EASTERBROOK and J. M. WOOD, of Geneva, N. Y.—*Improvement in Machine for Peeling Willow.*—Patent dated January 21, 1862.—This machine is used for stripping the bark from willow preparatory to its manufacture into baskets. The wheels may be adjusted to greater or less pressure, and the form of their peripheries causes the bark to be easily loosened. On leaving the wheels, the willows pass through scrapers made to conform to the size of the willow, which strip off the bark, the brushes removing any bark which may have escaped the action of the scrapers.

Claim.—First, the two pressure wheels D F, when provided, respectively, the one with a V-shaped groove *b*, and the other with a beaded projection *c*, and used in combination with a stripping device formed of the projections *m*, of plate L, for the purpose set forth.

Second, the projections *m*, attached to yielding slides *i*, which are fitted in a plate L, between the bars K K, and arranged in relation with the wheels D F, to operate as and for the purpose specified.

Third, the combination of the wheels D F, projection *m*, of the plate L, rotary brushes M M, and discharging rollers N N, all arranged for joint operation as and for the purpose set forth.

No. 34,202.—JOHN D. FLANSBURGH, of Philadelphia, Pa.—*Improved Culinary Pot.*—Patent dated January 21, 1862.—This invention consists in providing a supplementary handle cast with the pot, on one side of the same, for the purpose of obtaining a better hold upon it in lifting or pouring out any hot contents.

Claim.—As an improved article of manufacture, the culinary pot described, the same having the supplementary handle *c*, cast thereon, substantially as set forth, and for the purposes specified.

No. 34,203.—B. W. FRANKLIN, of New York, N. Y.—*Improved Fusible Gauge for Temperatures.*—Patent dated January 21, 1862.—This invention consists in providing a cup case or other vessel, with one or more suitable compartments, containing an alloy or alloys of metals whose fusing point having been determined, shall, when attached to a boiler, heater, or hot-air chamber, indicate the temperature.

Claim.—The described fusible gauge, the fusible alloys being used in the peculiar manner specified, thus indicating the temperature by the condition of the alloy, whether the same be granular, semi-fluid, or fluid, substantially as set forth.

No. 34,204.—WM. C. GOODWIN, of Hamden, Conn.—*Improved Folding Arm Chair.*—Patent dated January 21, 1862.—The side rails of the seat are made double so as to have the legs in one part and the posts which support the arm in the other, the two parts being

hung together by lapping sacking around the joint and nailing it to both parts, so as to form a flexible hinge, the weight of the seat tending constantly to bind the parts firmly together.

Claim.—The folding arm-chair made with double seat rails, when the substance used for the sacking, or seat, also constitutes the hinges, and the whole is constructed and fitted for use substantially as described.

No. 34,205.—A. H. HASTINGS, of New York, N. Y.—*Improved Refrigerator.*—Patent dated January 21, 1862.—On opposite sides of the case there are secured two cylindrical chambers connected at their lower part with the bottom of the refrigerator by means of passages provided with valves opening outwards. The cylinders contain piston rods and heads, operated by a lever whose fulcrum is on the top of the case. The operation of the pistons serves to exhaust and rarefy the air in the case and thus reduce the temperature.

Claim.—The described refrigerator as an article of manufacture, constructed, arranged, and used in the manner and for the purpose specified.

No. 34,206.—OBADIAH HOPKINS, of New York, N. Y.—*Improvement in Defending Redoubts by Shells.*—Patent dated January 21, 1862.—In the apex of the covering a round hole or opening is made, directly under which is placed a piston, the top of which is slightly concave and secured in a vertical position in a frame, so that by the action of a lever attached to the piston it can be depressed to receive a shell on the top, and then elevated to bring the shell above the covering to be exploded.

Claim.—The application of the mechanical device, or its equivalent, for elevating and exploding shell above the covering at the apex, substantially as and for the purposes specified.

No. 34,207.—CHARLES T. JAMES, of Providence, R. I.—*Improvement in Hot Projectiles for Ordnance.*—Patent dated January 21, 1862.—The separate point may be readily taken off and put on so that the body of the shot can be heated, and the point put on while cold, for the purpose of producing a shot which, when fired in the heated state, will possess a penetrating power equal or nearly equal to shot fired in the cold state, thus combining in one shot the property of hardness required for effectually penetrating objects fired at with the heat required for setting fire to the same. With the above is combined an expansible packing ring, to be expanded by the force of the discharge, so as to shut out windage and take the grooves of the cannon, if rifled, and give the rotary motion to the shot.

Claim.—Making elongated shot with a separable point, which can be readily taken off and put on, substantially as and for the purpose specified.

Also, making elongated shot with separable point, substantially as described, in combination with the separable packing, or the equivalent thereof, to be expanded by the force of the discharge, substantially as and for the purpose specified.

No. 34,208.—RANNAH JUSTIS, of Dublin, Ind.—*Improvement in Churns.*—Patent dated January 21, 1862.—The dasher is made in volute form with a series of slats slightly separated from each other, and provided with four wings placed equidistantly on its periphery The rotation of the dasher causes the milk to enter the aperture at the conjunction of the largest and smallest portion of the volute, when it is forced out between the slats and impinges against the concave sides of the case.

Claim.—The horizontal open volute dasher E, having door G, wings I, and detachable shaft C, as and for the purposes set forth.

No. 34,209.—SAMUEL D. KENDALL, of Brooklyn, N. Y.—*Improvement in Truss Girders for Bridges.*—Patent dated January 21, 1862.—The object of this invention is to obtain a truss of great strength, in proportion to the weight of material employed in its construction, by means of the combination of devices named in the claim.

Claim.—The arrangement and combination, substantially as described, of the chords A B C, posts D D*, braces E E, tension rods G G, binding blocks F F, and couplings *h h*, the whole forming a truss girder for a bridge or other structure.

No. 34,210.—THOMAS LANGHAM, of Philadelphia, Pa.—*Improvement in Knitting Machines.*—Patent dated January 21, 1862.—The nature and object of this invention are set forth in the claim. The machine does not admit of a brief description.

Claim.—First, producing a circular-ribbed fabric by means of a series of self-acting needles so arranged in radial grooves of two stationary plates and so operated that some of the needles shall operate on the outside of the fabric, while others operate on the inside of the fabric, as specified.

Second, the employment of radial reciprocating needles made self-acting at both ends, combined with the devices described, or their equivalents, whereby the said needles may be so transposed as to operate either on the inside or outside of the fabric, without any interruption of the knitting, as set forth for the purpose specified.

No. 34,211.—LOWELL G. MERRILL, of Angels, Cal.—*Improved Mode of Chopping to Pieces Ships or other Wooden Substances under Water.*—Patent dated January 21, 1862.—

The invention consists of two buoys upon which is secured a piece of timber. Through this timber a hollow tool shaft is placed, which may be adjusted to any desired depth. The buoys are anchored or secured over a sunken vessel, and the action of the waves, causing a rising and falling or rocking motion, serves to operate the tool which cuts in pieces the sunken vessel.

Claim.—The construction and arrangement of the several parts A B C D E and *a*, in the manner described, to be operated by the action of the water, as described, for the purpose stated.

No. 34,212.—F. S. MERRITT, of New York, N. Y.—*Improvement in Cooking Ranges.*—Patent dated January 21, 1862.—In the back part of the fire chamber of a cooking range is placed a rotating cylinder or frustum of a cone, one side of which is of fire-brick or other material, and the opposite side forming a water back, an air-heating chamber being between the two, so that either the fire-brick or water back may be made to form the back of the fire chamber, and an air-heating chamber obtained which may be used in either of the two portions of the cylinder or frustum of a cone. The frustum works on tubular trunnions which connect with the water back; on turning the frustum so that the water back forms the back of the fire chamber water flows into the water back; but when turned so that the fire back forms the back the flow of water is stopped.

Claim.—First, the combination of a fire-brick C and water back E, arranged at the back part of the fire chamber A of a cooking range, so as to form a cylinder or a frustum of a cone, and be rotated so that either the fire-brick or the water back may form the back of the fire chamber, as desired.

Second, the air-heating chamber F interposed between the fire-brick C and water back E, when the same are suspended and made to rotate, as and for the purpose specified.

Third, the tubular trunnions a^*, provided with passages *d d'*, in combination with the sockets b^* b^{**}, provided with the holes or openings *e e*, and arranged and applied to the rotating water back E, as shown, to automatically stop and start the flow of water through the water back E, as set forth.

Fourth, rotating the frustum D by means of the pins or teeth *f* and screw H, when the latter is placed or formed on a rod I, which passes through the range at one side of the fire chamber, so that the frustum can be turned by the operator or attendant at the front of the stove.

No. 34,213.—A. W. MORSE, of Eaton, N. Y.—*Improvement in Track-Clearers in Mowing Machines.*—Patent dated January 21, 1862.—The track-clearer is attached to the rear of the outer end of the finger-bar by a hinged joint, and is made in three parts. Two guides of segmental form are attached to each side and permanently fastened to the lower part of the clearer, between which the upper part is raised and supported, being held at any desired point by a set screw or bolt.

Claim.—First, a track-clearer to a grass harvester, capable of being expanded vertically and adjusted laterally, in combination with an adjustable handle, attached to it in such a manner as to regulate its capacity as circumstances may require, substantially as and for the purpose set forth.

Second, the adjustable handle M, when combined with a track-clearer, by means of the socket and fastening, substantially as and for the purpose specified.

No. 34,214.—JAMES PIERCY, of Bloomfield, N. J.—*Improvement in Washers for Paper Pulp.*—Patent dated January 21, 1862.—The bearing of the journal boxes of the washer is permanently fixed to the upper edge of the plate or valve board, so that when the journal boxes are raised by means of the rack, the box on the side next to the side of the vat will carry up with it the plate, the lower portion of which will be brought over the opening in the side of the vat for the purpose of discharging water from the vat.

Claim.—The combination of the washer B, its journal box *e*, and the valve board C, under a method of construction and operation substantially as described.

No. 34,215.—B. F. RAY, of Baltimore, Md.—*Improvement in Harvesters.*—Patent dated January 21, 1862.—The invention has for its object economy in the cost of construction, and curving the continuous bar insures a sufficient degree of elasticity to avoid injuries consequent upon contact with stones or other hard substances. The arrangement of devices claimed is designed for more readily raising and lowering the cutter bar and frame while the machine is in motion.

Claim.—First, making the frame bar and the frame of the cutter bar of one continuous piece, having the curved part *x* as described.

Second, the arrangement of the bearings and boxes of the rocker shaft, in combination with the friction roller and cam groove, as described.

No. 34,216.—A. T. RUSSELL, of New York, N. Y.—*Improved Cork-Screw.*—Patent dated January 21, 1862.—This invention is fully explained by the engraving and claim.

Claim.—The application of the cam or eccentric and piston as a leverage or power to attach to cork-screws, for drawing corks or stopples from bottles.

No. 34,217.—WILLIAM SELLERS, of Philadelphia, Pa.—*Improvement in Mode of Transmitting and Arresting Motion.*—Patent dated January 21, 1862.—Rotary motion is transmitted from one shaft to another by means of a ratchet wheel and pawl, the latter being attached to the driven shaft, and so arranged that while retained in gear with the ratchet wheel of the driver the latter will, through this pawl, communicate its motion to the second shaft, which now continues to be driven until, by the interposition of a suitable stop, the pawl is thrown out of gear, the driven shaft being thereby disconnected now remains idle until, upon the removal of the stop, the pawl is again thrown into gear with the ratchet wheel, which thus imparts motion to the second shaft. A friction pad attached to the pawl may be used when the driver has a continuous motion in one direction. Adjustable stops are used where the driven shaft requires to move only during a variable portion of a revolution in either direction

Claim.—First, the described device for transmitting and arresting rotary or vibrating motion, consisting of a ratchet wheel and pawl, when the ratchet wheel is the driver, combined with a stop or stops, the whole operating substantially in the manner set forth.

Second, the employment of a friction pad, or its equivalent, in connexion with a ratchet wheel, pawl and stop or stops, operating substantially in the manner and for the purpose specified.

Third, combining with the device for transmitting and arresting motion adjustable stops, for the purpose of varying the motion transmitted to any desired portion of a revolution, as set forth.

No. 34,218.—CHARLES A. SLACK, of Frenchtown, N. J.—*Improvement in Wagon and Carriage Brakes.*—Patent dated January 21, 1862.—The body of the vehicle or frame upon which it rests is placed loosely on the bolsters, so that a sliding movement will be allowed the body independently of the running gear, and the former made, by its own gravity, to actuate the brake in descending hills, the body resuming its proper position and relieving the wheels from the brake when the wheels pass on level ground.

Claim.—The employment, in combination with the body J and bolsters F G, of the inclined blocks K, substantially as and for the purpose shown and described.

No. 34,219.—E. SMITH, of Cold Spring Harbor, N. Y.—*Improvement in Harvesters.*—Patent dated January 21, 1862.—This invention relates to a means employed for elevating the sickle bodily in a horizontal position so as to pass over obstructions—the sickle at the same time being arranged to turn on a shaft attached to the main frame of the machine, said shaft forming the only attachment to the main frame.

A pawl and segment rack in connexion with a cord and pulley to adjust the main frame is so arranged that the sickle is held in a horizontal rigid state as the main frame is actuated and its back part elevated.

Claim.—The pawl W actuated from the pulley F, substantially as shown, in connexion with the plate U, provided with the serrated edge *f*, and fitted on the shaft M, all being arranged to operate as and for the purpose set forth.

Further, in combination with the pawl W and serrated plate U, arranged as shown, the pulley F, connected with the main frame A by the cord or chain K, cam H, and lever I, the pulley, cam, and lever being attached to the draught pole C, and all arranged substantially as and for the purpose specified.

No. 34,220.—MORITZ STANGE, of New York, N. Y.—*Improvement in Piano-fortes.*—Patent dated January 21, 1862.—This invention consists in so applying and arranging the steady pins in the soundboard-bridge and in combination with the strings as to obviate the tendency to twist the bridge and so strain the soundboard, an evil consequent upon the usual arrangement of pins.

Claim.—The arrangement of the pins *f* with the pins *e e* and strings *c c*, as shown and described.

No. 34,221.—E. N. STEERE, of Providence, R. I.—*Improvement in Spindle Bolsters.*—Patent dated January 21, 1862.—This invention consists in the employment of an isolated absorbent for holding the lubricating liquid in reserve in a separate chamber, in connexion with two or more oil passages for conducting the lubricating liquid to the spindle having a plain metal bearing.

Claim.—The combination of the isolated absorbent *s* and the passages or conductors *e e*, in connexion with the ordinary metal bearing of a spindle bolster, the same being arranged and operating substantially as described and for the purpose specified.

No. 34,222.—Cancelled.

No. 34,223.—SAMUEL S. WHITE, of Philadelphia, Pa.—*Improvement in the Manufacture of Artificial Teeth.*—Patent dated January 21, 1862.—The mineral teeth to which this invention relates are those used with the vulcanite work. The pins used heretofore have been without heads at their outer ends.

Claim.—The manufacture of mineral teeth, with pins having heads *d d d*, at their outer ends, substantially as and for the purpose specified.

No. 34,224.—WILLIAM E. WORTHEN, of New York, N. Y.—*Improvement in Architectural Sheet Metal.*—Patent dated January 21, 1862.—This invention consists in giving a roughened surface to sheet metal used for architectural purposes, so as to prevent unbroken reflection of masses of light and give it more nearly the appearance of stone or marble.

Claim.—The new article of manufacture described, which I term architectural sheet metal.

No. 34,225.—H. B. AMES, of Brooklyn, N. Y.—*Improvement in Hoop Skirts.*—Patent dated January 21, 1862.—The object of this invention is to avoid the wear consequent upon the use of a metallic clasp, alone and in contact with tapes and cords used for uniting the parts.

Claim.—The employment of a piece of leather or equivalent material between the metallic clasp and the tape or cord, for the purposes and as specified.

No. 34,226.—C. R. ALSOP, of Middletown, Conn., assignor to J. W. ALSOP, of New York, N. Y.—*Improvement in Revolving Fire-arms.*—Patent dated January 21, 1862.—This invention consists in the method of applying a cam in combination with the hammer or cock, and with the rotary, many-chambered cylinders, for the purpose of forcing the latter forward toward the barrel, so as to make a tight joint therewith at the time of firing.

Claim.—The combination of the hammer cam I with the rearward extremity of the axis pin D, in the manner and for the purpose shown and described.

No. 34,227.—NATHAN AMES, of Saugus Centre, Mass., assignor to the GOODYEAR INDIA-RUBBER STOPPDE COMPANY, of Boston, Mass.—*Improved Bottle Stopple.*—Patent dated January 21, 1862.—By the use of the core, which is made of wood, metal, or other rigid material, a saving of India-rubber is effected, and rigidity and strength gained in forcing the stopple into the neck of the bottle.

Claim.—First, as a new article of manufacture, a stopple, consisting of a band, case, or thimble R, of rubber, or any of its compounds, and a core W of wood or other material, substantially as described and for the objects specified.

Second, constructing the core W, with an annular depression *d*, for the purpose of confining the rubber, and allowing the same to be of greater thickness where the most elasticity is required.

Third, constructing a stopple with a core W, rubber band, case or thimble R, and a thin coating of gutta-percha G, substantially as described and for the objects specified.

No. 34,228.—STEPHEN CURTIS, J,, assignor to Himself and HENRY YALE, of New York, N. Y.—*Improved Ice Pitcher.*—Patent dated January 21, 1862.—The object of this invention is to protect the bottom of the vessel from injury caused by the dropping of lumps of ice upon the same.

Claim.—The construction and use in ice pitchers or other vessels of the spring bottom C, supported upon springs, so as to yield to the impact of masses of ice or the like, and preserve the true bottom of the vessel, substantially in the manner and with the advantage set forth.

No. 34,229.—JEHU HATFIELD, assignor to PERCY & KING, of Troy, N. Y.—*Improvement in Machines for Making Paper Boxes.*—Patent dated January 21, 1862.—The object of this invention is to obtain a machine by which strips of paper board may be very expeditiously bent and pressed into angular form, for the manufacture of angular polygonal paper boxes.

Claim.—The sliding bar F, with the roller G, attached in connexion with the stationary bar or bed C, spring E, slide H, and bar *a*, arranged substantially as and for the purpose set forth.

No. 34,230.—HENRY HOWSON, assignor to W. F. WARBURTON, of Philadelphia, Pa.—*Improved Box for Matches.*—Patent dated January 21, 1862.—The invention consists of a tilting receptacle having a projecting front by which it is made to open; it is hung on projections passing through the outer casing at each side, which form the axis on which the receptacle vibrates, and the rear part being rounded and made to preponderate, it is thus rendered self-closing.

Claim.—The receptacle B, with its projecting front and open top, when so hung to and so combined with an outer frame or casing A, of such a shape that the latter shall form a cover for the said receptacle, and when the latter is rendered by a weight or otherwise self-closing against the cover, substantially as set forth, for the purpose specified.

No. 34,231.—J. A. PEASE, assignor to C. A. PEASE, of New York, N. Y.—*Improvement in Tobacco Pipes.*—Patent dated January 21, 1862.—The perforations in the plug or cylinder extend from end to end, and are made to communicate with each other through small channels at the termini of every alternate pair, in such a manner as to give the smoke a course equal to their whole lengths combined, for the purpose of cooling it.

Claim.—The combination of the perforated plug or cylinder A with the piston E and case or cylinder C, in which it moves, as described.

No. 34,232.—W. H. FURNESS, of Quincy, Ill.—*Improvement in Coach and Furniture Varnish.*—Patent dated January 21, 1862.—The claim explains the nature of this invention.

Claim.—The use of coal oil or kerosene and yellow wax as ingredients in the making of coach or furniture varnish out of the ordinary gums and driers used for this purpose, and as set forth.

No. 34,233.—T. K. ANDERSON, of Hornellsville, N. Y.—*Improved Composition of Fuse or Slow Match for Igniting Powder under Water.*—Patent dated January 28, 1862.—The ingredients of which this compound consists are nitre, charcoal, sulphur, and muriate of soda, prepared as specified, and charged in a quill or tube.

Claim.—A compound consisting of the four named ingredients, in or about the same proportions specified, prepared and used in the manner as and for the purposes set forth.

No. 34,234.—FREDERICK ANDRIESSEN, of Allegheny City, Pa.—*Improved Car Truck Regulator.*—Patent dated January 28, 1862.—This invention consists in placing three truck frames, the centre one being exactly equidistant from the two outer ones, under every wagon-chest or locomotive, (connected with a tender.) The middle truck is self-adjusting sidewise.

Claim.—The application of this self-adjusting regulator with the four leading poles, friction rollers, &c., (see letters A, B B, C C C C, D D D D D D D D, and E E E E of the drawings,) to R R, locomotives and cars.

No. 34,235.—C. H. BRADLEY, of Westchester, Pa.—*Improvement in the Muzzle of Fire-arms for Cutting off Cartridges.*—Patent dated January 28, 1862.—This invention has for its object the cutting, tearing, or breaking the cartridge at the top or muzzle of the gun barrel.

Claim.—Providing a portion or the whole of the end or muzzle of the gun barrel with teeth, or otherwise rendering the same rough, as and for the purpose set forth and described.

No. 34,236.—O. N. BRAINERD, of Marion, Iowa.—*Improved Evaporating Pans for Saccharine Liquids.*—Patent dated January 28, 1862.—The heat passing through the flue between the two pans is designed to heat simultaneously the contents of the upper and lower pans, and two strainers in combination with these pans are so arranged that the juice in passing from one pan to the next succeeding one is strained and freed from curdles or other impurities, and at the same time gradually boiled down.

Claim.—First, the arrangement of the pans A and B in combination with the flue D at the bottom of the former and at the top of the latter, constructed and operating in the manner and for the purpose shown and described.

Second, the arrangement of the strainers G H in combination with the pans A B C, constructed and operating as and for the purpose specified.

No. 34,237.—JOHN S. BROOKS, of Rochester, N. Y.—*Improvement in Sad-Iron Heaters.*—Patent dated January 28, 1862.—The central apartment has lids which fall each side, while the lids at each end admit of being raised only so far as to fall by their own weight when the iron is removed.

Claim.—An improved sad-iron heater, consisting of the pan A divided into separate compartments for each iron, with hinged falling lids or covers *c d* so arranged that the removal of an iron from one chamber will cause the lid or lids to fall over the adjoining one, substantially in the manner and for the purposes described.

No. 34,238.—JAMES BURRELL, of Central City, Colorado Territory.—*Improved Amalgamator and Ore Crusher.*—Patent dated January 28, 1862.—This invention is designed for separating gold from quarts and to receive the pulp as it is discharged from the ordinary stamp batteries or stamping mills. The pulp is acted upon in the grooves by the balls, and the cylinder, with an amalgamated inner surface, serves to receive the contents of the pulveriser and separate any particles of gold that may have escaped amalgamation in passing through the pulveriser.

Claim.—First, a rotating or reciprocating pulveriser and amalgamator B, when constructed with a series of circumferential grooves *d*, each of which is provided with a ball D, arranged as described.

Second, in connexion with the pulveriser and amalgamator B, constructed as described, the cylinder H, provided with an amalgamated inner surface, and arranged to operate conjointly with B, substantially as and for the purpose set forth.

No. 34,239.—JAS. M. CLARK, of Lancaster, Pa.—*Improvement in Apparatus for Feeding Mills.*—Patent dated January 28, 1862.—The cup, which may be adjusted from one side to the other so as to run true, revolves with the stone, and as it becomes filled with grain, the latter, by centrifugal action, is thrown off against the stationary shield, from which it drops into the eye of the stone to be ground; choking of the tube is thus avoided, and regularity of feed attained.

Claim.—First, the employment of the revolving cup F, when adjustable, substantially as and for the purpose specified.

Second, the arrangement of the cup F, the strap *a*, and rim E, secured and connected by means of clips *c c*, substantially as represented.

Third, the employment of the stationary shield G, used and for the purpose specified.

No. 34,240.—JAMES W. CLARK, of Springfield, Mass.—*Improvement in Tools for Making Screws.*—Patent dated January 28, 1862.—This tool may be used in an ordinary lathe, and consists in the arrangement of three cutters, fitted into a common stock, provided with two guide openings, or rests, one to fit the head and the other the shank of the screw, in such a manner that by the action of the first tool the wire is turned down to the size of the head, by the second to the size of the shank, and by the third the point is rounded and the screw prepared to receive the thread.

Claim.—The arrangement of the cutters B C F, opening *e*, segmental rim *d*, and movable guide-plate G, in combination with the stock A, as and for the purpose described.

No. 34,241.—C. A. CODDING, of Augusta, Mich.—*Improvement in Cheese Presses.*—Patent dated January 28, 1862.—The bottom of the press being movable admits of being turned and adjusted to prevent clogging of its perforations, and also admits of easy removal of the cheese after it is pressed.

Claim.—The employment of the adjustable bottom C, constructed as set forth, in combination with the hoop or cylinder A, and perforated plunger B, arranged and operating as and for the purpose specified.

No. 34,242.—JAMES M. CONNEL, of Newark, and JOHN S. HALL, of Columbus, Ohio.—*Improvement in Shells for Rifled Ordnance.*—Patent dated January 28, 1862.—When the projectile is in flight the magazine abuts against the partition at the lower part of the forward chamber of the projectile, but as soon as motion ceases the nipple end of the magazine abuts suddenly against the screw plug at the cone end of the projectile, causing an explosion of the cap and of the powder in the magazine; the contents of the two chambers then become ignited, and the projectile explodes.

Claim.—First, the explosive projectile made of two hollow parts A A′ B B′, which are fitted together so that a space C exists between their facing ends *a b* and the part A A′ having circumferentially segmental cavities D, and the part B B′ having angular cavities E, bevelled projections F, and a bevelled, continuous circumferential edge G, and the whole being encircled and held together by a lead packing ring H, in the manner and for the purposes described.

Second, constructing the interior of one portion of the projectile with a front and rear rest or shoulder *c d*, and arranging in or against the same an open-ended hollow tube K, for the purpose of separating the contents of the chamber J from the igniting magazine K′, substantially as and for the purposes set forth.

Third, in combination with the shoulders *c d* and tube K, we claim providing a central opening *f* in the end *a* of the part A A′, and a similar hole *g* in the end *b* of part B B′, and arranging and igniting magazine K′ K2, within the hollow tube K, and in the openings *f g*, in the manner and for the purpose described.

Fourth, the combination of a sliding, igniting magazine with the hollow explosive projectile, substantially as and for the purposes described.

No. 34,243.—RANSOM COOK, of Saratoga Springs, N. Y.—*Improved Lunch Box.*—Patent dated January 28, 1862.—This invention consists of an arrangement of dishes, cups, &c., arranged within a case for the use of travellers, laborers from home, and others.

Claim.—A lunch case, composed of the dishes E E E, the vessels F F, the drinking cups G G, the inner cover C, its rib D, with the case A, and the cover B, the whole constructed and arranged as set forth for the purpose specified.

No. 34,244.—SIMEON COON, of Ithaca, N. Y.—*Improvement in Window-Sash and Setting Glass therein.*—Patent dated January 28, 1862.—The upright or the horizontal bars of the window-sash or munnions are made stationary, and grooved to fit the edges of the panes of glass; the other bars are also grooved, but made detachable, the end being made fast in its place by a notch or dowel pin. A slot is cut in one side or top of the window-sash, parallel with the detachable munnions, for the reception of a pane of glass, the munnion is then placed upon it and the glass secured.

Claim.—The peculiar construction of window-sash with loose munnions adjusted as described, and slots cut through the frame for the purpose of admitting glass; all in combination with the method of securing the glass, as set forth in my specification.

No. 34,245.—JOSEPH H. DUFFIELD, of Glassboro', N. J.—*Improvement in Cases for Railroad Tickets.*—Patent dated January 28, 1862.—The object of this device is to cause a single ticket to protrude from a pack by means of a sliding spring stem, so arranged that by removing the pressure of the finger or thumb, applied to push the said stem inward, the reaction of the same shall bring forward the single ticket required.

Claim.—The application to a ticket case, constructed in any suitable form, of the sliding spring stem C, constructed and arranged to operate in combination therewith and the tickets contained, in the manner described and set forth, for the purpose specified.

No. 34,246.—O. L. EDWARDS and NELSON GABEL, of Gratis, Ohio.—*Improvement in Fences.*—Patent dated January 28, 1862.—The claim and engraving explain the nature and object of this invention.

Claim.—In the construction of portable fences, the combination and arranging of keys *b b′*, *d d*, post C and E, and rails A, substantially as set forth.

No. 34,247.—JOHN ELLIS, of Detroit, Mich.—*Improvement in Carriage Gates.*—Patent dated January 28, 1862.—By pulling the cord on either side the gate is raised so that the latch escapes from its catch; the gate then swings open by its own weight, away from the rope that is pulled. By pulling the other cord the gate swings back and closes.

Claim.—The extension H, cap K, latch I, and connecting link *a*, in combination with the ropes M M′, when these several parts are constructed, arranged, and operated as and for the purposes set forth.

No. 34,248.—GEORGE F. EVANS, of Norway, Me.—*Improvement in Plane Stocks.*—Patent dated January 28, 1862.—The plane is so constructed that its bearing surface or face may be readily adjusted to conform to circular surfaces of different degrees of curvature, whereby such curved parts may be easily and smoothly planed.

Claim.—Improved plane, having its body A, its bearing plate E, its screws G G′, traversing nuts H H′, and connecting rods I I, constructed and arranged in relation to each other, and so as to operate together, as set forth.

No. 34,249.—SAMUEL W. FRANCIS, of New York, N. Y.—*Improved Pocket Match-Box.*—Patent dated January 28, 1862.—The invention consists in providing a flat box, open at one end, with a drawer held in by a spring, so that when the former is drawn in by the spring, after it has been drawn half-way out, one match is made to project from the box, and, being pulled, is lighted by inside friction.

Claim.—The combination and arrangement of the box A B, the drawer C, the springs F and I, and stopper M, substantially as and for the purpose specified.

No. 34,250.—THOMAS J. GRIFFIN, of Brooklyn, N. Y.—*Improved Combined Camp Cot and Chest.*—Patent dated January 28, 1862.—The object of this invention is to combine a cot and chest in such a manner that the same can either be used as a cot or a chest, to contain the mattress and bed clothes, and also books and other articles required by officers and privates in camp.

Claim.—The described combination of camp cot and chest, consisting of the three sections of mattress frame D D′ E, hinged together so as to have the two former fold up compactly upon the latter when not in use as a couch, the latter forming a tight cover for the chest A, and a support or bedstead for the couch, the whole arranged to operate in the manner and for the purpose set forth.

No. 34,251.—HIRAM GRANT, of Chicago, Ill.—*Improved Roofing Composition for Railroad Cars, &c.*—Patent dated January 28, 1862.—This composition consists of coal tar white pulverised resin, India-rubber cut in spirits of turpentine, shellac varnish, asphaltum varnish, brown japan, boiled linseed oil, white lead, mineral paint, yellow ochre, and sugar of lead, prepared as specified.

Claim.—The above-named composition matter or ingredients, when prepared in the proportions and in the manner specified, and applied as stated.

No. 34,252.—FLORIAN GROSJEAN, of New York, N. Y.—*Improvement in Sheet Metal Spoons.*—Patent dated January 28, 1862.—The object of this invention is to impart strength and firmness to the narrow or weak part of the handle, and to improve the shape and finish of the spoon.

Claim.—Corrugating the handle of spoons or forks made of single pieces of sheet metal, with the central corrugation and outer bead combined, substantially as and for the purpose specified.

No. 34,255.—PETER W. HARDWICK, of Williamsburg, Ind.—*Improved Apparatus for Attaching and Detaching Horses to and from Carriages.*—Patent dated January 28, 1862.—The invention consists in connecting two pairs of clamps with plates and springs, so that a horse may be instantly detached from the carriage. The end of the straps extend to the inside of the carriage, and the string is removed from the clamps by pulling the strap.

Claim.—The clamps as constructed, in connexion with the plates or their equivalents, in combination with the spring, the whole being constructed, arranged, and operated substantially as above set forth.

No. 34,254.—JOHN J. HAYDEN, of Indianapolis, Ind.—*Improvement in Metallic Roofing.*—Patent dated January 28, 1862.—This roofing is used without solder, and its construction is designed to overcome capillary attraction, also expansion and contraction from heat and cold, and to attain security against under or upper currents of air during storms.

Claim.—First, the combination in diamond sheet metal roofing, of the peculiar character described, of the upward and downward bent or curved points S S′, substantially in the manner and for the purposes described.

Second, the combination of the diamond sheets, eave, side, and comb, or saddle triangular pieces, and cleats, with the roof of a house, the said parts being constructed and applied in the manner and for the purposes described.

No. 34,255.—T. H. and HENRY JAMES, of Stockport, N. Y.—*Improvement in Power Looms.*—Patent dated January 28, 1862.—The invention consists in the mode of combining the whip roll with the weighted levers employed to produce friction upon the yarn beam, whereby the letting off of the yarn is controlled by the tension of the warp, and the said tension kept nearly uniform, whatever may be the quantity of yarn on the beam. The weights are adjusted according to the tension desired in weaving, so that they will just balance the tension of the warp, and hold back the whip roll as far as permitted by the friction straps.

Claim.—The arrangement of the elbow levers I I, rods H H, and the weighted levers E with the whip roll G, straps D D, and yarn beam C, in the manner shown and described.

No. 34,256.—ALBERT KEITH, of Lisbon, Ill.—*Improvement in Grading and Excavating Machines.*—Patent dated January 28, 1862.—The object of this invention is to render the cutter or share adjustable in such a manner as to cause it to work in a perfectly horizontal position in a transverse direction, however much inclined may be the surface of the ground over which the machine is passing; also so constructing the endless conveying apron that the earth will be readily discharged from it, and in so arranging the cutter or share beam that the cutter may be made to penetrate the earth at a greater or less distance, as may be required, the cutter being rendered capable of adjustment.

Claim.—First, constructing the endless apron E′ of a series of metal plates H′, attached to rods *f*, the ends of which are connected to chains *g g*, and all arranged, as shown, to admit of a certain degree of tilting of the plates H′ as they pass around the pulley F′, as and for the purposes set forth.

Second, attaching the beam A to the oblique bars O R by means of joints or hinges P Q, in connexion with adjustable slide M′, fitted on the perforated bar L′, provided with a catch or lever N′, and attached to the upright notched bar I, all being arranged, as shown, to admit of the adjustment of the beam A and cutter or share B in a transverse direction, as set forth.

Third, supporting the front part of the beam A by means of a caster wheel C, connected with an adjustable lever E′, in combination with the wheel J, which supports the back part of the beam A, and is connected with the adjustable lever K, all arranged as and for the purpose specified.

No. 34,257.—E. M. LUCKETT, of Philadelphia, Pa.—*Improved Mode of Clearing Snow from Railroad Tracks.*—Patent dated January 28, 1862.—The object of this invention is to render the snow and ice on the rails easy of removal by means of the waste steam of the locomotive.

Claim.—The addition of a chamber over the dome of the steam boiler of a locomotive engine, and the introduction of a pipe to convey the waste steam to the rail, (as set forth in the drawing,) which, with the aid of an improved snow shovel, will cleanse the rail from snow, frost, and dirt, thus improving the speed of the engine and turning the steam to a profitable account.

No. 34,258.—EDWARD LYNCH, of Buffalo, N. Y.—*Improvement in Attaching Beds to Tents.*—Patent dated January 28, 1862.—The beds are secured to cross-bars on one side and laced together on the other. The ends of the bars are fastened into staples secured to an adjustable slide upon the tent poles.

Claim.—First, the arrangement of the beds E E, the bars D, strap J, and the cords H I, as and for the purpose specified.

Second, the employment of the slides *d d*, with loops or staples attached, used in connexion with the bars D D, in the manner and for the purpose specified.

No. 34,259.—JACOB MARTIN, of Mound City, Ill.—*Improvement in Relieving Slide Valves of Pressure.*—Patent dated January 28, 1862.—The slide valve is connected to the piston, which is fitted to an open cylinder in the back of the valve chest, and upon which the pressure of the steam acts in opposition to its pressure on the back of the valve. The roller runs freely upon the bar, and so relieves the valve of pressure to the extent due to the pressure upon the piston.

Claim.—Combining the slide valve with the piston D by means of a roller G attached to the valve, and a bar H attached to the said piston, substantially as and for the purpose specified.

No. 34,260.—THOMAS MILES, of Philadelphia, Pa.—*Improvement in Slinging Knapsacks.*—Patent dated January 28, 1862.—This device is designed to economize cost and weight, simplify the means of sustaining the knapsack upon the back, and dispense with all breast straps.

Claim.—Sustaining a knapsack upon the back and shoulders of the wearer, by means of a single strap and a single fastening, substantially as described.

No. 34,261.—J. T. MINARD, of Danbury, N. H.—*Improvement in Seats for Wagons and Sleighs.*—Patent dated January 28, 1862.—When the vehicle is used with two seats, the front seat is fastened to the loops in front; the back seat is then elevated until it is on a line with the cross piece; the seat ends or arms are then raised and connected with the back by means of an iron hook or catch; the movable seat is then lowered to a level with the front seat, when it rests on two projections on the seat ends.

Claim.—The peculiar construction of the adjustable seat B in combination with the movable seat A to a wagon or sleigh body, so as to form a single or double-seated wagon or sleigh, arranged as and for the purpose specified.

No. 34,262.—WILLIAM MORRISSON, of Chadd's Ford, Pa.—*Improvement in combined Iron and Steel Ploughs.*—Patent dated January 28, 1862.—Plate iron and steel are so welded together that the face of the mould-board shall be of steel, and the back of it of iron—the object being to resist the cutting by gritty matter, while the iron will protect the highly-tempered steel from being broken. The adjustable steel cutter is so arranged as to be moved forward as it wears away, thus avoiding the necessity of a coulter.

Claim.—First, a mould-board for a plough composed of a steel face and an iron back, made and united to the plough substantially as described.

Second, in combination with a permanent land side and a bar share, as described, a steel cutter that is united to the outside of such land side, and by a groove to the bar share, in such manner as to be adjusted thereon, as it wears away, as set forth and described.

No. 34,263.—J. R. PRESCOTT, of Waterford, N. Y.—*Improvement in Breech-loading Cannon.*—Patent dated January 28, 1862.—This invention is represented as applied to a batter of two pieces. That portion of the cannon next to the breech is made square, and this square part has shoulders which project beyond each side of the barrel. Around the said shoulders are fastened bands which hold the barrels and breech piece together. The gun is hung on trunnions, and on the threads of the bands are nuts, on each of which are check nuts to prevent the others from working loose by the action of the gun.

Claim.—The arrangement of the adjustable bands and bars with the breech piece and shoulders C in the manner shown and described.

No. 34,264.—T. J. PRICE, of Industry, Ill.—*Improvement in construction of Evaporating Pans for Saccharine and other Juices.*—Patent dated January 28, 1862.—The partitions extending across the pan, with apertures only at their lower outer edges, serve to prevent the passage of the scum from one division to another. The canvas luting is designed to prevent leakage when the edges of the plates overlap in a horizontal position. The arrangement of the furnace and flues is designed to impart a high degree of heat to the forward divisions of the pan and act with less intensity on the divisions containing the sirup.

Claim.—First, an evaporator for saccharine or other juices, having partitions J extending from side to side with openings at alternate ends, and secured by bolts or rivets between upturned flanges *a* of the bottom plates, all as before explained.

Second, the combination of the vertical flanges *a*, horizontal lapping edges *a′*, and painted canvas luting *s*, all arranged and employed in the manner and for the purpose explained.

Third, the combined arrangement of the furnace A, contracted throat C and guards R, applied to the rear divisions of the pan, all as shown and described, and for the purpose specified.

No. 34,265.—D. B. RAY, of Circleville, Ohio.—*Improved Type-setting Machine.*—Patent dated January 28, 1862.—The tubes are so constructed that the type, as they are being distributed by hand into hoppers or funnels, shall be made to arrange themselves in passing through the tubes with the notched edges all turned the same way. The arm is twisted for the purpose of reversing the position of the type as it passes down. Catches are placed at the bottom of each tube to prevent the type from sliding out, which tubes are operated when necessary by a key. The composing stick is so constructed with a spring and slide attached as to bring the type into a perpendicular position at whatever angle they may be dropped into the stick.

Claim.—First, constructing tubes C C, or their equivalents, with two branches or arms M and M′, and a regulator *g* and its mechanism, substantially in the manner and for the purpose set forth.

Second, the spirally-curved or twisted tube M in combination with the main tube C, substantially in the manner and for the purpose set forth.

Third, arranging the tubes or their equivalents, like the radii of a circle.

Fourth, the catch *t*, for feeding out the type.

Fifth, the spring *f*, slide *z*, and rockshaft *v*, combined with the composing stick S, substantially in the manner and for the purpose set forth.

No. 34,266.—T. C. RICE, of Cambridgeport, Mass.—*Improvement in Breech-loading Ordnance.*—Patent dated January 28, 1862.—The screw cap forms a part of the breech of the gun and operates to close the breech in conjunction with the slide and breech pin combined, which, after a vertical movement, occasioned by its own gravity, is conveyed horizontally forward by the action of the screw.

Claim.—The combination of the slide B with the screw cap C and barrel A, substantially in the manner shown and described.

No. 34,267.—M. B. RIGGS, of New York, N. Y.—*Improvement in Guard Fingers for Harvesters.*—Patent dated January 28, 1862.—This invention relates to the construction of the guard finger and the mode of attaching a stationary steel cutter in each finger, which, in conjunction with the movable cutters, operates upon the principle of shear blades.

Claim.—The bar E, made either entire or in sections, and provided with the lugs F, as described, when arranged in combination with the fingers and counter cutters in the manner and for the purpose specified.

No. 34,268.—J. P. ROLLINS, of Cedar Rapids, Iowa.—*Improvement in Shells for Rifled Ordnance.*—Patent dated January 28, 1862.—When the projectile strikes an object, the plunger is first arrested, and the continued movement of the projectile brings the cap in contact with the inner end of the plunger, and produces the explosion.

Claim.—The combination of a sliding spring rod F projecting in front of the shell with a discharge nipple *e*, formed upon a screw D, inserted from the rear, all substantially as and for the purpose set forth.

No. 34,269.—W. J. SAGE, of Steubenville, Ohio.—*Improvement in Mode of Propelling Cars.*—Patent dated January 28, 1862.—The object of this invention is to apply the propelling power to railroad cars in such a manner as to avoid the friction now produced by the weight of the cars on the axles of the wheels. To this end gears or pinions are attached to the axles of the wheels, which gears or pinions are fitted between toothed rims or drums to which the power is applied.

Claim.—The two drums or cylinders D F, provided with the toothed rims E G, with the pinions C of the axles A placed between them, as and for the purpose set forth.

No. 34,270.—WILLIAM ROMANS, of Columbus, Ohio.—*Improvement in Locomotive Cars.*—Patent dated January 28, 1862.—The truck sustaining the locomotive, &c., is made free to move round in the path of a horizontal circle in turning curves of railroad tracks. The water-tank, locomotive truck frame, engines, cylinders and valves of the locomotive are so arranged that the eccentrics, link motions and valve rods are located between the truck frame and inner faces of the driving wheels to attain the necessary compactness. The front bolster and fender are made removable, so that the locomotive truck with all its attachments can at any moment be run out from under the end of the car. The rear truck is made to be moved to the centre of the length of the car when it is necessary to turn it completely around or pass over sharp curves.

Claim.—First, the manner, substantially as described, of adapting a locomotive and a car for direct connexion with one another in such a manner that all the connexions of the locomotive are free to turn independently of the car, and that the weight of the front end of the car rests centrally, or nearly centrally, on the locomotive truck, and thus is made available for steadying the locomotive on the track while the centre of motion of the locomotive is transferred from the rear end to the centre of the truck, all as and for the purpose set forth.

Second, making the front bolster G, and also the fender F, removable, substantially as and for the purpose set forth.

Third, in combination with the construction and use of the devices, as set forth in the first claim, in the manner substantially as described, of arranging the valve rods, link motions and eccentrics, between the inner faces of the locomotive driving wheels and the outer sides of the locomotive truck frame, for the purpose set forth.

Fourth, so constructing and arranging the car and the rear truck, and connecting the same, that the truck, while the car is resting upon it, may be moved a greater or less distance toward the locomotive, and when thus moved shall be free to turn curves, substantially as and for the purpose set forth.

Fifth, the combination of the flanged plate V i, of the rear truck and the tubular projections *k* of the rear bolster J of the car, substantially as and for the purpose described.

No. 34,271.—J. F. SCHOLFIELD, of Lawrence, Mass.—*Improvement in Shuttles.*—Patent dated January 28, 1862.—As the yarn leaves the spindle of the shuttle it comes in contact with the right lip of a concave shell, and is guided by a wedg-eshaped projection towards the inner surface of the shell, from which it passes to the left lip of the shell, producing thereby an angle in the thread, by means of which all kinks are removed from the yarn before passing into the cloth through the tubes.

Claim.—The application of this device, made from either metal or any other suitable material, to a weaver's shuttle for preventing kinks in the weft while passing from the shuttle to the cloth, substantially as set forth.

No. 34,272.—JOSEPH SHORT, of Boston, Mass.—*Improvement in Knapsacks.*—Patent dated January 28, 1862.—This invention is designed to supply means whereby the wearriness consequent upon the strain of one set of muscles is relieved; also to obviate the difficulty caused by the knapsack slipping down upon the small of the back, which brings the greatest weight upon the weakest part of the body.

Claim.—First, arranging, disposing, and attaching straps to and upon a knapsack, so that its top may be allowed to fall away from contact with the shoulders and spine of the wearer, for the purpose of ventilating the back and shoulder of the wearer, and at the same time cause a different set of muscles to be brought into action, in the manner substantially as described.

Second, arranging and adapting straps to support and confine a knapsack to the shoulders and back of the wearer, so that it can be raised and lowered in a vertical line, or nearly in a vertical line, upon the back and shoulders of the wearer, and be held in the desired fixed position, on such line, at the will of the operator, in the manner substantially as described.

Third, a combined neck and shoulder strap, having connexions with a knapsack by intermediate straps, at points which are at or near the top and base of the knapsack, for the purpose specified.

Fourth, the combination of the removable curved side walls, with the adjusting straps, whereby the body of the knapsack is adapted to the back and shoulders of the wearer in its different positions, as and for the purpose described.

No. 34,273.—A. H. SILVESTER, of Boston, Mass.—*Improvement in the Manufacture of Bootees.*—Patent dated January 28, 1862.—The advantages claimed in this article are cheapness of manufacture, great durability, capability of adjustment to feet of different sizes, and facility of putting on and taking off.

Claim.—The bootee, constructed as described, with the adjustable fastenings, and whereby all the advantages are combined, as an improved new article of manufacture, for the purposes specified.

No. 34,274.—L. E. SMITH, of New Haven, Conn.—*Improvement in Railroad Station Indicators.*—Patent dated January 28, 1862.—Within a suitable box inside the car are enclosed two rollers upon which is rolled a band of cloth having the names of the stations, where the train stops, printed upon it. The cloth being wound from one roller to the other, displays the name of the station required; springs against flanges on the roller prevent their being turned by the motion of the car.

Claim.—The combination of the box, rollers, curtain and springs, substantially as described and for the purpose set forth.

No. 34,275.—MATTHEW SMITH, of Pittsburg, Pa.—*Improvement in Steam Boilers.*—Patent dated January 28, 1862.—By this arrangement it is claimed that only one-third of the water generally used in cylinder boilers is necessary, and this being kept in contact with the hottest portion of the shell, is quickly heated and steam more rapidly generated. Supporting the receiver on trunnions admits of its being rotated so as to clean out the accumulation of mud, &c. The blow-off valve or cock is for the purpose of blowing off water which may accumulate in the receiver by condensation or otherwise.

Claim.—Combining with the interior of a cylindrical boiler a steam receiver or receivers, wholly or partially immersed in the water, and permanently held in such proximity to the bottom of the boiler as to produce a thin sheet of water between the receiver and the boiler, for the purpose as set forth.

Second, the combination of a steam receiver, by means of trunnions, with the interior of a cylindrical boiler, in the manner and for the purpose as set forth.

Third, the combination of a blow-off valve or cock with a steam receiver, in a cylindrical boiler, passing through the boiler and communicating only with the interior of the receiver, for the purpose as stated.

No. 34,276.—DANIEL W. SWIFT, of West Falmouth, Mass.—*Improved Clothes-wringing Machine.*—Patent dated January 28, 1862.—The object of this invention is to admit of the ready adjustment of the rollers to the varying thicknesses of the clothes passing between them; the guide pins serve to keep the clothes in proper position.

Claim.—First, the springs E E constructed of steel of the form shown, when said springs are applied to the cylinder A of the frame of the device to form a support for the lower roller F, and at the same time admit of the upper roller G being applied to them so that the springs will press said roller G on the roller F, as set forth.

Second, The guide pins I I when attached to the bar H, fitted on the springs E E and placed in relation with the rollers F G, as and for the purpose specified.

No. 34,277.—ANDREW TURNBULL, of West Meriden, Conn.—*Improvement in Lamps.*—Patent dated January 28, 1862.—The invention consists in a method of snuffing the coal from the wick and extinguishing the light when desirable by means of a piece of metal plate attached to and operated by a crank.

Claim.—Combining with the tube *f* a spindle crank *j* snuffer or extinguisher *j'*, substantially as and for the purpose described.

No. 34,278.—JOHN S. WHITEHILL, of Westchester, Pa.—*Improvement in Running Gear of Wagons.*—Patent dated January 28, 1862.—The front and rear hounds are made alike so as to be connected by an adjustable coupling pole and bolt to admit of attaching the horses to either end of the wagon.

Claim.—The adjustable coupling pole A held by the king bolt D passing through the rear end of hounds and circular plate E, all in combination as described, and for the purposes set forth.

No. 34,279.—WILLIAM WICKEN, of Muscoda, Wis.—*Improvement in Grain Separators.*—Patent dated January 28, 1862.—The cockle screen has a lateral movement in common with the shoe and a reciprocating sliding movement, the object being to prevent choking or clogging of the screen. The chess screen has a reciprocating sliding movement only, and separates the chess and shrunken grain from the sound grain.

Claim.—Operating the screens D' G, and giving them a reciprocating sliding movement through the medium of the bell crank F fitted in the shoe C, and connected to the screens D' G by means of the hook E and rod K, and also to a stationary rod *j*, the screens being operated by the movement of the shoe C, all arranged in the manner described.

No. 34,280.—G. K. DEARBORN, of Abington, Mass., assignor to S. F. TAPLEY, Chelsea, Mass.—*Improvement in Heaters for Passenger Cars.*—Patent dated January 28, 1862.—The furnace is placed under the floor of the car, an outer casing with a bottom plate forms an air chamber, air passes through openings in the bottom plate, and being heated by the furnace passes into the car through a register. An auxiliary pipe or flue communicates from the draught pipe to the upper part of the furnace for the purpose of carrying off any gas which may escape.

Claim.—The furnace for railway and street cars, constructed substantially as described, with the flues K and auxiliary flues, said furnace being arranged under the floor of the car, and operating substantially as set forth.

No. 34,281.—JOSEE JOHNSON, of New York, N. Y., assignor to Himself and JOHN WARD, Jr., Brooklyn, N. Y.—*Improved Clothes Wringer.*—Patent dated January 28, 1862.—The advantages claimed for this device are compactness, simplicity, and cheapness, with lightness and strength, owing to the thinness allowable in the metal parts and absence of fastenings usually required.

Claim.—First, the described metallic frame for a wringing machine, constructed in two parts, A B, the dividing line passing through the axis of the rollers C D, and the sides being so formed as to partially enclose the said rollers, and serve as guides for the clothes, substantially as and for the purposes described.

Second, the recess G in each end of each of the parts A and B, so made that when the parts A and B are placed together they formed an enclosed space for the springs H, substantially as set forth.

No. 34,282.—JAMES A. HAMER, of Chester, Pa., assignor to W. L. PAXON, of Philadelphia, Pa.—*Improvement in Brick Moulds.*—Patent dated January 28, 1862.—The cross pieces are provided with angular projections on their edges, working in grooves or recesses in the side pieces; the end cross pieces are forced towards each other by means of cranks and shafts, causing the sides to be drawn closer together, and thus compactly holding all the parts together. Vibrating valves are hinged to the sides to enable the grooves to be easily washed or cleaned out.

Claim.—First, the combination of the side pieces A A with their angular grooves, with the cross pieces C D, double crank shafts E E, and lifting pieces *ffff*, constructed and operated in relation to each other substantially as described.

Second, the combination of the vibrating valves *h* with the sides A A and cross pieces, substantially as and for the purposes set forth.

No. 34,283.—WM. PETERS, assignor to Himself and R. B. PORTER, of Baltimore, Md.—*Improvement in Packing for Steam and other Engines.*—Patent dated January 28, 1862.—The packing is prepared by placing layers of asbestos and layers of flax or wool or other material alternately in a tub of water, through the bottom of which tubes conveying steam enter, and thus the mass is made to assume the condition of pulp; the pulp is then laid upon an even surface and compressed into plates of the required thickness.

Claim.—The packing described for steam and other joints, composed of asbestos and vegetable or animal fibre or material.

No. 34,284.—HENRY T. ROMERTZE, of Philadelphia, Pa.—*Improvement in Automatic Car Coupling.*—Patent dated January 28, 1862.—The coupling is operated by pulling the lever towards the rear end of the box, which forces open the two jaws, when the projections entering the jaw slots expel the parallel bar-head ends from the slots, thus assisting the bar to issue freely from the box. By reversing the lever the jaws close and are held in position by a spring and the upper jaw of the lever.

Claim.—The jaws *b b*, the sockets *c c*, the slots *i i*, in combination with the releasing lever *d*, spring *g*, case or box *a*, with the projections *h*, substantially as shown and described.

No. 34,285.—DANIEL M. MEFFORD, of Cincinnati, Ohio.—*Improvement in Projectiles for Fire-arms.*—Patent dated January 28, 1862.—This projectile consists of a wooden shaft and a metallic head of smaller diameter. It is designed to obviate the necessity of rifling the gun, as affording great range and precision to a smooth-bore musket.

Claim.—A projectile having a metallic head of smaller diameter than the bore of the piece with which it is intended to be used, and a shaft of wood or other light material, the greatest diameter of which fits the bore, or nearly so, when the parts are so formed and combined that the greatest diameter of the shot is in the rear of the centre of the figure, and the centre of the figure is in the rear of the centre of gravity, substantially as shown and explained.

No. 34,286.—STEPHEN F. AMBLER, of Brooklyn, N. Y.—*Improved Amalgamator.*—Patent dated February 4, 1862.—The ore is fed into the pan, into which mercury has been placed; motion is then given to the pan, by means of which, and a current of water, the sand is separated from the gold or silver and carried to the discharge opening and trough. An agitating board, provided with copper or iron pins, is used to prevent the sand from caking and carrying off the finer particles of gold and mercury. The sand and water are discharged from the side of the pan where the least agitation occurs, in order to retain the finer particles of gold within the pan.

Claim.—First, giving to the pan D the shaking and vibratory motions for the purpose described.

Second, the combination of the agitating board H, constructed as shown, with the pan D, for the purpose specified.

Third, placing the discharge openings O, upon the side of the pan D, for the purpose set forth.

No. 34,287.—EDWARD D. BAKER, of Claremont, N. H.—*Improvement in the Construction of Ordnance.*—Patent dated February 4, 1862.—Near the rear end of the gun are two flanges, either wrought, shrunk, or slipped on against shoulders. From one to the other of these flanges are passed a series of strengthening rods, strained up by nuts and screws. The gun, between the flanges, is wrapped with wire in one or more layers, the ends being securely fastened in the flanges; the object being to strengthen the gun at and near the point of discharge.

Claim.—First, the flanges projecting from the body of the gun, near the breech, in combination with the external screw or straining rods, substantially as and for the purpose described.

Second, in combination with the flanges, the wire wrappings, said flanges furnishing both a support for and the means of securing the ends of the wires, substantially as described.

No. 34,288.—F. H. BARTHOLOMEW, of New York, N. Y.—*Improvement in Valve Regulators.*—Patent dated February 4, 1862.—The object of this invention is to determine the stopping of the discharge of water under pressure into an open vessel from which water may be removed, so as to prevent waste. Also, to facilitate the adjustment of the combined mechanism between the open vessel and the valve or cock, for the purpose of regulating the quantity with which the open vessel is to be filled before the discharge is to be stopped.

Claim.—First, the combination of an open vessel from which water may be removed, with a valve that controls the discharge of the water under pressure into said open vessel, by mechanism, substantially as described, so that the weight of water in the open vessel determines the closing of the valve.

Second, the combination of the handle by which the valve is opened with the mechanism described, with the open vessel, and with the valve, in such manner that the said handle is made available both to open the valve and to adjust the said mechanism, substantially as described.

No. 34,289.—THOMAS L. BIRCH and JOHN C. NOBLE, of Washington, Pa.—*Improvement in Car Couplings.*—Patent dated February 4, 1862.—This invention consists of an automatic coupler, adapted to secure the cars when the latter are run together, without necessitating an accurate adjustment of the parts, or setting them at specific relative heights.

Claim.—The combination of the similarly-formed double-hooked bars C C' *c c'*, springs F, and levers G', when the parts are so constructed and arranged as to adapt the hooks to lock together whichever is uppermost, substantially as explained.

No. 34,290.—S. A. CLEMENS, of Rockford, Ill.—*Improvement in Construction of Walls of Buildings.*—Patent dated February 4, 1862.—The walls having two or more parallel chambered spaces within it, admit of one of the chambers being filled with mortar concrete, or other material; the other space may be left vacant for the purpose of combining solidity and the non-conducting advantages of the hollow space.

Claim.—The method of constructing the walls of buildings, and other structures, of lath or any narrow strips of wood put up in two or more parallel tiers or rows, with cross-ties of the same secured between the lath by mortar or nails, to be finished by plastering, when combined either with the vacant space or spaces between the tiers or rows of lath, or with a

filling of mortar, or other material, in the said space or spaces, whether the entire skeleton wall be constructed of the lath-work, or it be combined with parts of a frame, substantially as described and for the purposes specified.

No. 34,291.—EDWARD CONROY, of Boston, Mass.—*Improvement in Machines for Cutting Corks.*—Patent dated February 4, 1862.—The blocks of corks are cut into slices or sticks of the desired thickness, and after being cut are caused to drop freely from under the knife by the action of the vibrating gauge; the automatic tilting table, with the cutters, are for the purpose of cutting sticks into suitable length for the corks.

Claim.—First, the arrangement of the vibrating gauge-plate H, and stationary rest G, in combination with the reciprocating knife *b*, constructed and operating substantially in the manner and for the purpose shown and described.

Second, the arrangement of the tilting table G, in combination with one or more rotary cutters L, constructed and operating substantially as and for the purpose set forth.

No. 34,292.—SAMUEL and L. A. DAVIS, of Providence, R. I.—*Improved Washing Machine.*—Patent dated February 4, 1862.—The clothes are placed under the plunger, which, as it descends, is forced into the clothes, and in rising draws up and loosens them by means of the suction produced, thus preventing the packing of the clothes at the bottom of the box.

Claim.—First, the combination of the two suds boxes A B, the latter being fitted within the former, perforated at its sides and bottom, and provided with a perforated reciprocating plunger C, substantially as and for the purpose set forth.

Second, the two levers F G, when arranged and connected together as shown, and with the plunger C, and used in connection with the boxes A B, as and for the purposes set forth.

No. 34,293.—EDWARD V. DICKIE, of Fishkill Landing, N. Y.—*Improved Chimney for Lamps.*—Patent dated February 4, 1862.—This invention allows the separate cone to be dispensed with, and is designed to provide for the presentation of air in a proper manner by the form of the chimney alone.

Claim.—In glass chimneys for illuminating purposes, the transparent partition or partial partition *d*, when made part of and of the same piece as the chimney, substantially as and so as to realise the advantage set forth.

No. 34,294.—JOHN DICKSON, of Newcastle, Pa.—*Improvement in Manufacture of Sheet Iron.*—Patent dated February 4, 1862.—The object of this invention is to obtain a highly polished enamelled surface for sheet iron, which will not scale off when the iron is bent, and will resist the oxidising effect of the atmosphere and of water.

Claim.—The use of an enamel or preparation for giving a highly glazed and durable surface to sheet iron, composed of an oxide or oxides of lead and carbon, and prussian blue, pulverized and mixed with drying oil, and a solution of beeswax in oil of turpentine, or its equivalent, with or without the addition of a small proportion of acid, and in connection therewith the reviving of metallic lead in the enamel on the surface of the iron during the annealing process, in the manner and for the purpose described.

No. 34,295.—WATSON DUCHEMIN, of Charlottetown, Prince Edward's Island.—*Improved Anti-friction Bearing of Hoisting Blocks.*—Patent dated February 4, 1862.—A ring or loose sleeve is introduced between the axle and friction rolls which increases the diameter of the circle of rolls, for the purpose of preventing the liability of the axle crushing between any two rolls.

Claim.—The sleeve *g*, operating in combination with the box *a*, and friction rollers *h*, substantially as described.

No. 34,296.—J. H. ELLIS, of Brooklyn, Pa.—*Improvement in Mills for Crushing Apples, Sugar Cane, &c.*—Patent dated February 4, 1862.—This invention consists in the combination of a pair of fluted crushing rollers and rotary cleaners, so constructed and arranged that the crushed substance is thoroughly cleaned out of the cavities in the rollers, and the latter thereby enabled always to work in an efficient manner.

Claim.—The fluted rollers B B, in combination with the rotary cleaners E E, when said parts are provided respectively with flutes *a*, of semi-cylindrical form and with hawk-bill projections *c*, and all arranged to operate as and for the purpose set forth.

No. 34,297.—WILLIAM FULTON, of Elizabeth City, N. J.—*Improvement in Cooking Apparatus.*—Patent dated February 4, 1862.—In this apparatus alcohol, coal oil, or naphtha are used as fuel. The flame passing up the funnel cooks the contents of the pan on the top of the jacket, and at the same time boils the liquid in the reservoir.

Claim.—The combination of the lamp A with the reservoir or boiler B, jacket C, and extinguisher D, when the whole are arranged, constructed and operated in the manner specified and for the purpose set forth.

No. 34,298.—BENJAMIN GARVEY, of Ashland, N. Y.—*Improvement in Ascertaining Position and Direction on Land and Sea.*—Patent dated February 4, 1862.—This device consists of a fly-wheel mounted within concentric rings placed upon a stand. The wheel is supported upon a long axle in a universal joint, the latter being supported by a suitable arm. By means of a tube connected with a reservoir of compressed air, a steam boiler or other suitable source of power, air or steam is forced into passages made through the fly-wheel, axle, rings and stand, to vents in the rim of the fly-wheel. To the inner concentric ring an indicator is attached, and to the middle ring a graduated circle. The fly-wheel, being put in motion, rotates in a plane parallel to that in which it was first set in motion, however its position may be changed, and furnishes a base from which the direction and changes in direction of other planes and of lines can be measured.

Claim.—The application of rotating bodies to the purpose of preserving normal or base lines or planes, whereby the direction and changes of direction of other planes and lines can be ascertained, for the purposes and in the manner set forth substantially in my specification.

No. 34,299.—A. P. GRIFFING, of East Cambridge, Mass.—*Improved Inkstand.*—Patent dated February 4, 1862.—By partially unscrewing the upper part, the two holes are brought in conjunction, and they are so arranged that when the upper plate is screwed down the lower hole will be entirely closed by the upper cap.

Claim.—My improved inkstand as made with its cap, screws, and holes arranged in the parts A B, substantially in manner and to operate as specified.

No. 34,300.—C. H. GUARD, of Troy, N. Y.—*Improved Machine for Making Carriage Wheels.*—Patent dated February 4, 1862.—A tool-rest is adapted to and secured in its position in the usual turning machine by means of a bolt and nut, and is readily removed when necessary.

Claim.—So proportioning and arranging certain of the parts of said machine that I am enabled, by the auxiliary use of a lathe-rest R, and a chuck L, to temporarily convert the same into a turning lathe of suitable proportion for shaping wheel hubs previous to mortising the same in said machine, all substantially as set forth.

No. 34,301.—CHARLES T. HOLLOWAY, of Baltimore, Md.—*Improvement in Branding and Stamping Irons.*—Patent dated February 4, 1862.—This invention consists in an improved device for readily securing and releasing movable dies for branding, stamping, or printing.

Claim.—A branding or stamping iron, consisting of a stock B, false bottom D, movable types, E and wedges F, or screws in lieu thereof; but otherwise constructed and arranged as shown and described.

No. 34,302.—GEORGE C. JONES, of Alna, Maine.—*Improvement in Shells for Ordnance.*—Patent dated February 4, 1862.—The opposite sides of the shell are flattened for the purpose of giving it a tendency to fall upon one of such sides when it comes to a state of rest, in order that the bullets in the projectile may be dispersed horizontally. When used as a shell the plug is removed and its chamber filled with powder so as to burst the projectile.

Claim.—First, a projectile flattened on opposite sides or at its poles, when its equatorial belt or larger diameter only is perforated with holes or bores perpendicular to the axis of the projectile, for the reception of bullets, substantially in the manner and for the purpose described.

Second, the removable plug or block D, by means of which, in combination with the enlarged chamber or cavity, I am enabled to use my projectile either as a shot or shell, substantially as set forth.

No. 34,303.—A. S. KING, of Commerce, Mich.—*Improvement in Gas Retorts.*—Patent dated February 4, 1862.—A movable cup, provided with a hollow cone at its bottom, is made to fit over a conical protuberance projecting from the bottom of the retort, for the purpose of increasing the heating surface and spreading the material of which the gas is manufactured over a greater surface than can be done on a plain bottom, and also for retaining the residuum from the material used, so that said residuum may be readily removed from the retort by simply removing the cap, this operation being facilitated by having the cap or cover of the retort movable. The arrangement of an annular chamber or belt in connection with the inner retort is for the purpose of preventing a draught of the gas in any one direction from the lower part of the retort, thereby allowing sufficient time for the perfect transformation of the material used into gas, and preventing the escape of the material in the form of vapor.

Claim.—First, the employment of a movable cup B, provided with a hollow cone *b*, as its bottom, in combination with a retort A, provided with a conical protuberance *a* at its bottom, and with a movable cap C, substantially in the manner and for the purpose shown and described.

Second, the arrangement of the annular belt E, in combination with the outer retort A, and with the inner retort D, as and for the purpose specified.

No. 34,304.—C. W. KERNS, of Baltimore, Md.—*Improved Sash Supporter and Fastener.*—Patent dated February 4, 1862.—This device is especially applicable to the windows of cars and carriages. The sash is secured at any point at which it may be placed, and by the application of the hand to the proper point to raise or lower it, is automatically released so that it may be freely moved.

Claim.—The obliquely-grooved slide E, in the described combination with the bolts C *c*, springs D, and a knob or handle F, the latter being employed to move the slide E, and likewise the sash itself, in either direction, all as explained.

No. 34,305.—L. B. LATHROP, of San José, Cal.—*Improvement in Apparatus for Shrinking Tires.*—Patent dated February 4, 1862.—This invention relates to a device for contracting or shrinking the tires of wheels for vehicles without cutting and welding. The object of the invention is to effect the result without the employment of levers and complex arrangements for compressing the heated part of the tire, as heretofore practiced.

Claim.—A tire-shrinking device composed of a block A, provided with a concave E, curved shoulder *b*, guides *d d*, movable jaws B B, and wedges D D, all combined and operating as shown and described for the purpose set forth.

No. 34,306.—JONES LAUBENSTEIN, of Minersville, Pa.—*Improvement in Coal Screens.*—Patent dated February 4, 1862.—This screen is constructed of square wrought-iron rods notched on an angle or corner with V-shaped notches and woven together; the object being to obviate the difficulty caused by the surface of the screen becoming smooth from use.

Claim.—An improved manufacture of screens for the screening and preparing of anthracite coal, or other coals and hard substances, similarly handled and prepared, substantially as described.

No. 34,307.—IRA LEONARD, of Lowell, Mass.—*Improvement in Railroad Chairs.*—Patent dated February 4, 1862.—The object of this invention is to avoid the jolts or jar consequent upon the wheels passing over the joints of the rails. The wooden cushion is designed to prevent the nuts of the bolts from being loosened by the jarring of the cars.

Claim.—A rail-connecting chair composed of a continuous sheet of wrought iron, bent into such a shape that it is enabled to embrace the base and the sides of the abutting ends of two rails, while it is rendered laterally elastic and vertically stiff by means of a hollow rib or fin immediately beneath the embracing jaws of said chair, all substantially as represented.

In connection with my said improved rail-connecting chair, I also claim the use of the wooden cushion, E or the equivalent thereof, in the manner and for the purpose set forth.

No. 34,308.—JAMES Y. LESLIE, of Brooklyn, N. Y.—*Improvement in Tobacco Holders.*—Patent dated February 4, 1862.—The charger holds a sufficient quantity to fill the pipe. The box being inverted, the gate is pressed inwardly and the charger filled. The gate is kept closed by a spring.

Claim.—The combination and arrangement of the stopple 1, charger 2, gate 3, spring 4, match-box 10, cover 11, pipe cleaner 6, the receptacles 7 and 9, with the case 8, or their equivalents, for the purposes set forth and described.

No. 34,309.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in Restoring Waste Rubber.*—Patent dated February 4, 1862.—The object of this invention is to restore old, waste India-rubber to such a plastic condition that it can be reworked and used again for manufacture.

Claim.—The combining or incorporating of waste vulcanized metallic or hermized rubber with vegetable tar or pine oils, for the purpose and substantially in the manner as set forth.

No. 34,310.—GEORGE B. MCCLINCH, of Hallowell, Maine.—*Improved Valve for Hydraulic Engines.*—Patent dated February 4, 1862.—The two opposite rubbing faces of the valve are so connected and arranged that a pressure within the chest, tending to force either valve plate laterally against its seat, will be counteracted by a similar pressure on the other valve plate. The two valve plates are joined by a connection bar or plate extending from one to the other through a passage between the bottom of the tube and the chest, in order to counteract their tendency, under pressure, to be borne towards one another at their lower parts.

Claim.—First, the arrangement, substantially as described, of two opposite port faces of the valve as well as those of its seat.

Second, the connection plate *f*, and its passage *e*, in combination with the two valve plates, their seat and chest, when the two opposite port faces of the valve and those of the seat thereof are arranged in manner substantially as described.

No. 34,311.—A. MCGUFFIE, of Rochester, N. Y.—*Improvement in Truss Girders for Bridges.*—Patent dated February 4, 1862.—The combination of the chord, posts, and braces with the catenary series of links, is designed to prevent the tendency of any one part of the girder to sink more than another; as a load resting at one point, the weight of the whole truss is tending to operate against it, and counteract the tendency of depression at that point.

Claim.—First, the combination with the catenary series of links A A, of a chord C, joint blocks B B, posts E E, and diagonal braces *f f*, the whole arranged substantially as specified.

Second, the joint blocks B B, serving the three purposes of connecting the links A A, supporting the joints of the chord and connecting the diagonal braces *f f* with the chain of links, substantially as specified.

No. 34,312.—CHARLES MONSON, of New Haven, Conn.—*Improved Writing Desk.*—Patent dated February 4, 1862.—The cover is so connected to the box, by two parallel bars, as to be movable upwards, backward and forwards, and may be used to place books or other articles thereon. The bottom of the drawer is raised or lowered by means of a bar operating two sets of levers. The drawer may be used as a desk.

Claim.—First, the application of the cover B to the drawer holder or box A, in manner and so as to operate therewith, substantially as specified.

Second, the improved drawer, as made, with the elevating bottom and mechanism combined with the said bottom and the drawer frame, the whole being arranged substantially in manner and to operate as specified.

No. 34,313.—CHARLES MONSON, of New Haven, Conn.—*Improvement in Ladders and Staging for Artisans.*—Patent dated February 4, 1862.—The ladders admit of a movement in a vertical plane on pivots, and the leg stands can be lengthened so that the platform can be raised in proportion to the varying angle of the ladders.

Claim.—The combination of the two sets of parallel bars or ladders, a base or foot connection, and a leg stand or pair of stands, or the mechanical equivalent therefor, the whole constituting a ladder or artisan's stage, substantially as described.

No. 34,314.—CHARLES MONSON, of New Haven, Conn.—*Improved folding Stair Case and Ladder.*—Patent dated February 4, 1862.—A series of stair plates are secured between two sets of bars by joint pins, which admit of their being folded. Holes are made near the edges of the stairs for the hand to seize in climbing; spring catches are fitted to notches for the purpose of keeping the bars the requisite distance apart.

Claim.—First, the described ship ladder or folding staircase or combination of stair plates, (or mechanical equivalents,) and parallel bars, arranged and connected substantially in the manner and so as to operate as described.

Second, the combination and arrangement of a series of hand holes with the said stair plates, (or their equivalents,) and their parallel bars, when arranged and connected substantially in the manner and so as to operate as specified.

Third, the combination of a spring catch and a series of notches or mechanical equivalents therefor, with the stairway constructed of stair plates and parallel bars, arranged in manner and so as to operate substantially as set forth.

No. 34,315.—HUGH W. MOSHER, of Coeymans, N. Y.—*Improvement in Cooking Stove.*—Patent dated February 4, 1862.—The object of this invention is to obtain a cooking stove which will be self-feeding, that is to say replenish its flue chamber with coals for a considerable period of time, and also be capable, by a simple adjustment, of being converted from a self-feeding coal to an ordinary wood-burning stove.

Claim.—The plate G, having a grate H attached, when used in combination with the front plate of the stove, the fire chamber C, flues *a a c*, and the draught openings *f f h h i*, as and for the purpose specified.

No. 34,316.—GEORGE OWEN, of Jacksonville, Ill.—*Improved Coupling for Double Ploughs.*—Patent dated February 4, 1862.—The ploughs are for cultivating between two rows of corn at the same time, and are so constructed as to be readily brought together and used as a double mould-board plough. The coupling bars are curved upward so as to pass over the growing corn.

Claim.—First, connecting two single ploughs by means of the hinged coupling pieces or rods *s s*, attached to the beams of said ploughs in the rear of the standards thereof, so as to bring the ploughs close together, and thereby form a double mould-board plough, in the manner and for the purpose described.

Second, the combination of the curved or bent pieces *t t*, and the sliding joints of the bars C and D, in the manner and for the purpose specified.

Third, connecting the compound curved or bent bar C with the bar D, by means of the chain *z* or its equivalent, for the purpose set forth.

Fourth, the combination of the front curved stretcher bar B, and jointed bars C D, for the purpose of connecting two ploughs, as set forth.

Fifth, the combination of the front straight bar B with the curved or bent-jointed bar C, and straight-jointed bar D, for the purpose of connecting two ploughs, as specified.

No. 34,317.—WM. H. PALMER and WAITWELL CRUMB, of Orleans, N. Y.—*Improvement in Horse Pitchforks.*—Patent dated February 4, 1862.—When hay is to be elevated,

the bow is kept in position by means of a latch and spring placed in the shank. A cord is attached to the latch, and, when the desired elevation is attained, a sudden jerk of the cord causes the latch to be released, when the tines incline downward and the hay is discharged.

Claim.—In a horse pitchfork, when composed of cross bar, shank, and prongs that are rigidly connected and suspended for operation by means of a brace, as described, the bow springing from the suspension brace and connecting it with the shank, as set forth, in combination with a mechanism located within the shank, whereby the bow may be locked or allowed to slide, substantialy as described.

No. 34,318.—ADDISON SMITH, of New York, N. Y.—*Improvement in Rotary Blowers.*—Patent dated February 4, 1862.—The parts are designed to be so arranged that the moving or running parts may be operated at a very high rate of speed without being subjected to a great amount of wear and tear, and the air forced out by the action of the pistons, in connexion with the case, the blast produced being similar to that caused by an ordinary bellows, and not like that of ordinary rotary fans or blowers, produced by a vacuum formed by a rapid revolution of a fan within a case.

Claim.—The employment or use for the purposes specified of the external case A, having induction and eduction openings *d e*, in combination with the rotary cylinder B, when the latter is provided with radial sliding pistons C, placed eccentrically within the case A, and has its pistons C operated or drawn in and out so that their outer edges will be kept in contact with the inner surface of the body *b* of the case A through the medium of the segments F I and grooves *f g*, either or both of the latter being stationary or rotating, substantially as described.

No. 34,319.—C. M. SPENCER, of South Manchester, Conn.—*Improvements in Breech-loading Fire-arms.*—Patent dated February 4, 1862.—The breech moves in a direction lateral to the stock and barrel, the swinging movement being produced by the turning of the hammer-pin and an eccentric. The springs are operated by a flattened pin attached to a tumbler, and are made to assist in operating the breech. In opening the breech the hammer is drawn back as in cocking, and a finger is pressed against the trigger to draw it back sufficiently to allow the cock-notch to pass it, and the trigger to be drawn back beyond the cocked position.

Claim.—First, in combination with the breech C and eccentric D, applied as described, the hammer F, secured to the eccentric for the purpose of enabling the breech to be operated by the movements of the hammer, substantially as specified.

Second, in combination with the hammer F, eccentric D, and breech C, the main spring or springs I I, so applied in relation with a flattened portion *k* of the hammer-pin that the said spring or springs serve not only to produce the blow of the hammer, but to assist in operating the breech, as set forth.

Third, the cylindrical tumbler G, so applied on an upright axis, and in combination with the hammer and trigger, as to allow the cock-notch *j* to pass beyond the trigger and the hammer, to be thrown back for the operation of the breech beyond the position in which it is cocked, substantially as specified.

No. 34,320.—ROBERT SPENCER, of Brooklyn, N. Y.—*Improved Military or other Riding Saddles.*—Patent dated February 4, 1862.—This invention is designed to secure a firm seat to the rider, the front pieces being intended to prevent the rider from being thrown forward over the saddle, thus obviating the ill effects caused by the ordinary pommel under similar circumstances.

Claim.—The cantels C C and front pieces D D, when applied to or used in connexion with the parts A A of the tree connected by the springs B B, as and for the purpose specified.

No. 34,321.—GEORGE R. STUNTZ, of Superior, Wis.—*Improvement in Anemometers.*—Patent dated February 4, 1862.—An endless apron, moving upon three rollers, carries the paper upon which the record is to be made, a uniform velocity being given to one of the rollers by means of clock-work. A pencil-holder is attached to the lower part of the vane shaft, and the proper mark is made on the highest part of the apron above the roller. A pricker, actuated by a spring through mechanism operated by a wind-wheel, causes perforations to be made in the paper, the number occurring in a given length of paper, denoting the velocity of the wind during the intervals of time indicated by a time scale on the paper.

Claim.—First, the combination of the system of pencils *a a* described, the vane D, and the endless apron F, or equivalent device, moved by clock-work, for carrying a sheet of paper or other material on which the record of the direction of the wind is to be made, the whole arranged to operate substantially as described.

Second, the employment of one or more prickers *p*, actuated by means of one or more springs *i* and one or more pins *h*, deriving a rotary motion from a train of gearing driven by a wind-wheel attached to the vane, the whole operating substantially as described, for the purpose of recording upon the moving sheet of paper or other material the velocity of the wind.

No. 34,322.—JOHN G. TREADWELL, of Albany, N. Y.—*Improvement in Cook Stoves.*—Patent dated February 4, 1862.—The claim and engraving explain the nature and object of the invention.

Claim.—The employment of the plate a in connexion with the ovens B B, arranged as set forth, whereby two separate draughts of air are formed, one upon each side of the ovens, for equalizing the heat, substantially as set forth.

No. 34,323.—J. G. TREADWELL and WILLIAM HAILES, of Albany, N. Y.—*Improvement in Parlor Hot-air Stoves.*—Patent dated February 4, 1862.—The damper is placed at the connexion of the cross-pipe and fuel chamber, and is hinged at its upper side. On its lower side is an arm extending into the pipe, provided with a cup, into which one end of a rod, passing through the top of the cross-pipe, fits. The weight serves to keep the damper open when the cover is slightly raised, but when the cover is pressed down it acts upon a rod connected with the damper, and keeps it shut. The outer pipe is designed to conduct away gases from the fuel chamber.

Claim.—First, the employment of the damper K, constructed and arranged in the manner and for the purpose specified.

Second, the combination of the damper K, constructed and arranged as specified, with the cross-pipe G and pipe F, as and for the purpose set forth.

No. 34,324.—H. W. C. TWEDDLE, of Pittsburg, Pa.—*Improved Apparatus for Distilling Coal Oil and other Substances.*—Patent dated February 4, 1862.—Distillation is effected by means of superheated steam, and the apparatus is designed to dispense with fire in proximity to the still, thus insuring safety, and obviating the difficulties usually caused by the cracking or burning of the still, leakage of pipes, &c.

Claim.—First, the vacuum apparatus R, with which, by the use of steam, I produce a vacuum.

Second, the use of the vacuum apparatus R, arranged substantially as described, in combination with the receivers L and M, or their equivalents.

Third, the use of the vacuum apparatus R, in combination with the steam-pipe F, arranged in the interior of the still, substantially as described.

No. 34,325.—GEORGE W. WHITE, of New York, N. Y.—*Improvement in Breech-loading Fire-arms.*—Patent dated February 4, 1862.—The opening and closing of the breech and the shearing of the ends of the cartridge are accomplished by a semi-revolution performed twice or by a whole revolution once performed by the revolving plug, which latter has a cam-groove cut completely around it, at such an inclination as will give the plug a length of movement sufficient to withdraw its top below the opening leading to the barrel. The top of the plug having a sharp edge circumferentially, acts against the sharp edge of the opening of the barrel, thus causing a shear-cut by its combined revolving and sliding movement.

Claim.—Opening and closing the rear end of the barrel by means of a plug which has both a revolving and a sliding motion, substantially in the manner set forth.

No. 34,396.—JOHN ARMSTRONG, assignor to R. T. KENSIL & Co., of Philadelphia, Pa.—*Improved Apparatus for Drying Pasted Envelopes.*—Patent dated February 4, 1862.—The envelopes are confined to the endless bands by pieces of tape passing over each side of the gummed part. As the envelopes pass over the drum their gum folds are exposed to the blast created by the revolving fan, and thus become thoroughly dried.

Claim.—The drum or pulley A, its endless band E, and the endless tapers K, the whole being arranged and operating substantially as set forth, in combination with the fan or its equivalent, for the purpose specified.

No. 34,327.—F. B. FOURNIER, assignor to Himself and ROBERT WALLACE, of Berea, Ohio.—*Improved Drain Roller and Moulder Combined.*—Patent dated February 4, 1862.—This device is designed for rolling and moulding grain lands into beds or narrow lands for the purpose of draining.

Claim.—The combination of the rollers B and C with the enlargement *b*, when arranged in combination with the framework, so as to operate in the manner and for the purpose set forth.

Also, in combination therewith the plough D, in the manner and for the purpose specified.

No. 34,328.—E. D. GIRD, of Cedar Lake, N. Y., and R. GIRD, of Healdsburg, Cal., assignors to Themselves and T. J. BEDWELL, of Healdsburg, Cal.—*Improved Budding Knife.*—Patent dated February 4, 1862.—The curved portions of the blade are designed to cut the bud from the limb without taking any of the wood with it. A T-shaped incision being made in the back of the stock by the other blade, the bud is readily inserted.

Claim.—First, the employment or use of the blade B, provided with one or more curved portions *b*, substantially as shown, for the purpose of cutting the buds from the limbs.

Second, a blade provided with a spur *d* at its end, substantially as shown, for the purpose of making the T-shaped incision in the side of the stock to receive the bud.

Third, the combination of the blades B C, constructed substantially as shown and fitted in a suitable handle, the whole forming a new and useful implement for the purpose specified

No. 34,329.—HERRMANN GRUNDT, of Berlin, Prussia, assignor to HESS, KESSEL, & Co., of New York, N. Y.—*Improved Iron Pontoon.*—Patent dated February 4, 1862.—The several pieces or sections are so constructed and arranged that, by means of key or screw bolts, the said sections may be readily fastened together to form a pontoon. A part of one or both ends is made to be readily taken off or opened for the purpose of facilitating the loading or unloading the same.

Claim.—First, the arrangement and construction of iron pontoons, in sections, when said sections are provided at their ends with a flanch or angle iron, corresponding with a flanch or angle iron on another and adjoining section, the whole being arranged in the manner and for the purpose substantially as described.

Second, the use of an opening in one or both the end sections K and L in a pontoon constructed as described, closed by a door or doors, in the manner and for the purpose substantially as specified.

No. 34,330.—E. M. HENDRICKSON, of Brooklyn, N. Y., assignor to Himself J. H. PRENTICE, and J. W. BLACKHAM, of same place.—*Improvement in Sewing Machines.*—Patent dated February 4, 1862.—This invention consists in the employment of a swinging or sliding frame or plate, having a motion across that of the forward feed, in combination with a suitable clamp for compelling the fabric to reciprocate therewith, so as to bring the last stitch alternately to the right and left of the needle, and thereby to form stitches standing angularly to the line of the seam.

Upon the said reciprocating bed or plate is mounted a longitudinal feeding device, which is caused to move therewith so that the action of the said cross feed is prevented from exerting any sensible influence upon the proper action of the forward feed, even when they are both required to act at the same time.

In connection with the curved edge of the above-mentioned reciprocating bed or plate is used a clamp or presser foot so arranged as to hold the junction of the rim and body of a hat with an adjustable force in the line of the stitches, and to yield to the varying thickness of the stuff in either the rim or the body or both.

By means of an arrangement of hinges and springs, the presser foot may be folded so as to disconnect it from the hat, and allow the latter to be removed and another substituted, when the clamp may again be put in position for use.

Claim.—First, the transversely-reciprocating frame or plate K, in combination with a clamp or presser foot carried thereon, and adapted to compel the fabric to reciprocate transversely therewith, and to allow it to be fed longitudinally through or upon the same, substantially as and for the purpose set forth.

Second, mounting the longitudinal feeding device N N′, or its equivalent, on the cross feed reciprocating plate K, so that each shall perform its proper function, independently of the other, substantially as and for the purpose described.

Third, the clamp or presser foot U *u*, so arranged in connection with the curved edge of the plate K as to hold the junction of the rim and body of a hat with an adjustable force in the line of the stitches, and to yield to the varying thickness of the stuff, substantially as described.

Fourth, the combination of the hinges *u* and *v*, and springs *u‴* and *v′*, with the guide or presser foot U, for the purpose of allowing the said guide or presser foot to be folded back out of the way when changing the hat, and be again readily placed in position, substantially as described.

No. 34,331.—W. H. PLACE, assignor to Himself and GEORGE HAYWARD, of New York, N. Y.—*Improved Blast Generator.*—Patent dated February 4, 1862.—The arrangement of rings with the shaft and gearing is designed to produce an air-tight joint between the revolving cylinder and the adjoining side of the surrounding case, for the purpose of lessening friction usually caused by the stuffing box surrounding the shaft. An air chamber with a safety valve attached serves to give exit to the blast generated in case the usual orifice is suddenly closed while the machine is in operation.

Claim.—As an improvement on A. F. W. Party's hydraulic blast generator, patented June 2, 1857; first, the arrangement of rings A A B B with the shaft D and gearing F.

Second, the combination of valve V, or its equivalent, with the valve chamber G, as and for the purpose described.

No. 34,332.—CHRISTIAN EICHMAN, assignor to GUSTAV WEDEKIND, of Philadelphia, Pa.—*Improved Clasp for Lamp Shades.*—Patent dated February 4, 1862.—The springs are so bent as to bear against the glass chimney and serve to maintain the ring and shade at any desired altitude.

Claim.—The clasp composed of the metal ring D, having lips *f* and *h* formed by cutting the lower portion of the ring, and any convenient number of springs *m* and *n*, or their equivalents, the whole being constructed and arranged for attachment to the shade and chimney of a lamp, substantially as set forth.

No. 34,333.—S. H. ROPER, assignor to ELMER TOWNSEND, of Boston, Mass.—*Improvement in Hot-air Engines.*—Patent dated February 4, 1862.—The object of this invention is to keep the cylinder and piston cool, and also to prevent the entrance of cinders or dust from the fire between the cylinder and the piston.

Claim.—First, the employment of a current of air forced in between the prolongation of the piston and the cylinder in a direction counter to that entering from the fire-box, for the purpose described.

Second, the air space within the piston, in combination with the double-acting pumps and hollow pistons, for pumping cool air therein and therefrom, for the purpose of preserving the packing cool, as set forth.

Third, regulating the engine, by exhausting the air from the fire-box, by means of a governor, as set forth.

Fourth, placing the force-pumps upon the top of the cylinder and attaching the piston-rods M directly to the main piston, for the purpose described.

No. 34,334.—J. F. SARGENT, assignor to ELMER TOWNSEND, of Boston, Mass.—*Improvement in Machinery for Rolling Metal for Shoe Tacks.*—Patent dated February 4, 1862.—The reducing rollers are made with a bite, having the shape of two triangles or very sharp wedges, in order that the nail-plate or strip may have not only a wedge-shaped transverse section, but be straight in the direction of its length; the tendency of a single triangular bite to the rollers being to curve the plate inwards. The guides, provided with projections or lips at their inner ends, prevent the plate or strip from curving up against the upper roller, and the upsetting flanges are designed to prevent the strip from cracking or its edges having a rough and serrated appearance.

Claim.—The combination of the guides F F and the lips *f f*, or mechanical equivalents therefor, with the upsetting flanges and the reducing rollers bevelled in opposite directions, substantially as explained.

No. 34,335.—J. F. SARGENT, assignor to ELMER TOWNSEND, of Boston, Mass.—*Improvement in Machine, for Pegging Boots and Shoes.*—Patent dated February 4, 1862.—The awl and driver are secured in a block or carrier which slides vertically in a dovetailed groove formed in the face of the swing piece. This carrier is made to move up and down by means of a face cam, which is so formed and connected to the carrier as to impart a constantly accelerating motion to it, during that part of the rotation of the cam which is employed to force the awl and peg into the work. The swing-piece or pendulum is supported by the sleeve, and is so connected or pivoted therewith as to be capable of vibrating a short distance laterally about the axis of the shaft B or the sleeve F. The swing-piece is maintained in a vertical position by means of a face plate and a flange. The peg-box is connected with and forms a part of the swing-piece, the peg-wood being supplied to the machine by the action of the roughened feed-rollers having an intermittent partial rotation given them, by which the strip of peg-wood is fed forward at regular intervals. The knife which cuts the peg-wood is secured to a stationary vertical piece projecting from the main frame, each forward vibration of the swing-piece forcing the peg-wood against the knife, which severs a piece from the main strip. The vibration of the swing-piece effects the feed of the shoe, next the cutting of the peg-wood in separate pegs, and also the feed of the pegs to the action of the peg-drivers.

Claim.—First as a new machine, the combination of the mechanism for operating the awl, peg driver, and for feeding the work, with the mechanism for cutting and feeding the peg work, all being arranged compactly in the frame A, or its equivalent, and operated by the cams and levers, arranged substantially as and for the purposes described.

Second, the pendulum or swing piece H, having the awl and peg-driver carrier L, the throat piece *b*, the peg-box W, the pointing mechanism and peg-wood feeder, arranged and applied thereto, or connected therewith, as set forth, in combination with so applying such pendulum to a quill or sleeve F, disposed on the driving shaft B, or on a stud or arm arranged just above or below the same, that the whole may be caused to operate together in manner and for the purpose set forth.

Third, combining and arranging with a vibrating peg-box and peg-wood feeder, constructed as described, a stationary knife, whereby the pegs are severed from the peg-strip, in manner as set forth.

Fourth, so constructing and applying the throat-piece or block *b* to the pendulum H, as to have no vertical movement, in combination with so forming and applying the retainer, that it may have a short vertical movement, whereby the two are made to operate together in manner as set forth.

No. 34,336.—C. E. SWEENEY, assignor to Himself and W. H. HOOTON, of Charlestown, Mass.—*Improvement in Knapsacks.*—Patent dated February 4, 1862.—This device is designed to prevent the knapsack coming in immediate contact with the back, thus avoiding heat and consequent fatigue, as well as the ill effects of being chilled on the removal of the knapsack after a march.

Claim.—First, suspending the knapsack A on the frames B, or their equivalents, so that an air space may intervene between the knapsack and the back of the wearer, substantially as described and for the purpose set forth.

Second, the shoulder pads C, in combination with the frame B, for the purpose specified.

No. 34,337.—PHILIP ULMER, assignor to himself, L. H. WORMAN and J. O. ELY, of Philadelphia, Pa.—*Improvement in the construction of Knife and Fork.*—Patent dated February 4, 1862.—The object of the invention is economy in labor and material combined with strength and durability.

Claim.—Constructing the handles of table knives and forks of sheet metal shaped so as to be wholly closed and hollow, combined with the knife-blade or fork-tines, formed of sheet steel, substantially as and for the purpose specified.

No. 34,338.—PHILIP ULMER, assignor to Himself, L. H. WORMAN, and J. O. ELY, of Philadelphia, Pa.—*Improved Camp Spoon.*—Patent dated February 4, 1862.—The handle of the spoon has an aperture, and is bent in such a manner as to admit the handle of a knife and the tines of a fork fitting into flanges on the side of the handle.

Claim.—A spoon formed substantially as specified, so as to case with the knife and fork, as set forth.

No. 34,339.—G. W. WALKER, assignor to Himself and JOHN MAGER, of Lawrence, Mass.—*Improvement in Steak Broiler.*—Patent dated February 4, 1862.—This invention is designed to prevent the burning of the meat and its impregnation with smoke.

Claim.—My improved steak broiler, having its several parts constructed and arranged in relation to each other and so as to operate in manner as set forth.

No. 34,340.—G. L. WITSIL, assignor to Himself and L. S. HACKER, of Philadelphia, Pa.—*Improved Washing Machine.*—Patent dated February 4, 1862.—The ribs on the vibrating blocks bear on the clothes in succession so as to partially knead them and partially drag them over the stationary bottom ribs, thus causing every part of the clothes to be operated upon and the dirt forced from the fabric.

Claim.—The frame, with its vibrating ribbed blocks D, horizontal bar E and lever F, in combination with the vessel A and its permanent ribs *b*, the whole being arranged and operating as and for the purpose set forth.

No. 34,341.—B. B. LEWIS, of Bristol, Conn.—*Improvement in Calendar Clocks.*—Patent dated February 4, 1862.—This device is designed to be attached to a clock in use, and is made to indicate the month and day of the month, by means of hands or pointers. The apparatus does not admit of a brief description.

Claim.—First, arranging the month wheel F and the year wheel D to turn upon the same centre, in combination with the indicating pointers, that point to the numerical day of the month, and the month of the year, depicted on the face of the time dial, as a distinct attachment or device for a clock, substantially as and for the purpose described.

Second, the gears *q c*, cam *r*, plate *s*, combined with the wheels E F, arranged and operating substantially in the manner and for the purpose described.

Third, the hinged and pivoted click lever I, in combination with the guard *e*, gear B, arranged to communicate motion once in every twenty-four hours, from the centre or time spindle A, or gear *a*, to the wheel F, and at the same time to adjust itself to show on the face of a dial, through an indicating pointer *k*, the day or number of days in each of the months, substantially as described.

No. 34,342.—NATHANIEL ADAMS, of Cornwall, N. Y.—*Improvement in Running Gear of Carriages.*—Patent dated February 11, 1862.—The object of this invention is to allow the vehicle to which the device is applied to turn in a small compass by means of an arrangement for turning the hind axle by and simultaneously with the front axle, and in an opposite direction.

Claim.—The arrangement of the arm *c*, perch *e* and pivot *f*, with the independently-pivoted axles A B, as shown and described, for the purpose set forth.

No. 34,343.—C. M. ALEXANDER, of Washington, D. C.—*Improvement in Bridle-Bit Attachments.*—Patent dated February 11, 1862.—When the rein is lightly held, the spring will act directly upon the bit; but as soon as a strong pull is used, the spring yields and the strap causes the curb to act upon the jaw of the horse.

Claim.—The arrangement of the looped wires L L, passing through the springs, when used in combination with the shank A, strap F, and bridle-rein H, as and for the purpose specified.

No. 34,344.—J. L. BALDWIN, of Newark, N. J.—*Improvement in Moulds for making Daguerreotype Cases.*—Patent dated February 11, 1862.—A removable plunger forms the

centre upper portion of the die, and the outside portion is so combined with the casing as to be screwed down upon the lower portion of the die. The plunger is held in position, while the material is hardening, by means of a key. The outside upper portion of the die is constructed with a screw fitting into the casing to elevate and depress it, of the same pitch as the thread which forms the screw for fastening the case.

Claim.—First, the combination with the upper portion of the die C, frame or block A, and lower parts of the die or mould, of the plunger D substantially as described.

Second, the combination with the parts C and D of the key *g*, so as to accomplish the purpose set forth.

Third, constructing the part C with two thread portions or screws of equal pitch, one of which fits into the block A, and the other of which forms the screw upon the work, substantially as and for the purpose set forth.

No. 34,345.—J. S. and T. B. ATTERBURY and JAMES REDDICK, of Pittsburg, Pa.—*Improvement in the manufacture of Hollow Glassware.*—Patent dated February 11, 1862.—By placing figures or designs within the surfaces of the glass, it is designed to obviate the ill effects of oil, dust, &c., upon the figures. The specification describes a method of combining a moulding and blowing process.

Claim.—First, the manufacture of lamp pegs or bowls, and other descriptions of hollow glassware, with the ornamental designs or figures, intermediate the inner and outer plain surfaces of the glass, of which the articles are composed, substantially in the manner described.

Second, the performance within a sectional mould, such as we have shown, of the pressing and blowing processes, successively in the production of one and the same hollow article of glassware, substantially as and for the purposes set forth.

No. 34,346.—SAMUEL BENTZ, of Carroll County, Md.—*Improved Hulling Machine.*—Patent dated February 11, 1862.—This is a combination of devices for preparing grain for the market or mill, from the garners to its delivery in a merchantable state, by which it is screened and moistened so that the hulls may be readily removed, and subjected to a duplicated unbranning process by the attrition of one kernel upon another under pressure. It is then placed in a drying apparatus and subjected to a current of hot air, from whence it passes through a spout to the polisher, which removes any remaining small particles of foreign matter. Thence it passes to an elevator, by which it is carried to the top of a cooler, through which and a current of cool air it descends into a second cooler, which completes the operation.

Claim.—First, the employment of a conveyer trough, substantially as described, with flights, as specified, for moistening the grain, and in combination with the conveyor, the regulated water discharge, as and for the purposes set forth.

Second, the employment of an unbranner, for removing the husk or bran from edible grain in a moist state, consisting of a horizontal cylinder with inclined revolving wings, constructed substantially as and for the purposes set forth.

Third, in combination with a moistening apparatus and unbranner the drying apparatus, through which the grain is passed to be dried.

Fourth, the construction of the drying apparatus, with its partitions, &c., by which the air is compelled to commingle with the grain, either alone or in company with the detached bran or husk, as specified.

Fifth, polishing the grain after it has been dried, by passing it through an unbranning apparatus, as described.

Sixth, removing the bran, either in a moist or dry state, from one or all the points, while passing through the apparatus, by means of exhaust apparatus, applied substantially as and for the purpose set forth.

Seventh, regulating and controlling the current of air through the dryer, by means of the exhaust, as and for the purposes described.

Eighth, the apparatus for cooling the grain, constructed and arranged as set forth.

No. 34,347.—JOHN BUSER, of New York, N. Y.—*Improvement in Bottling Apparatus.*—Patent dated February 11, 1862.—This invention consists of a revolving bottle holder, actuated by mechanism, which presents the bottles placed therein for the reception of the fluid, then to the device for supplying the liquid under pressure and for introducing the cork, when the filled bottle is removed and another one introduced. A device is also employed that turns up the wire yoke before the pressure is relieved from the cork.

Claim.—First, the revolving holder *k*, with the receptacles 9, for the bottles, in combination with the crosshead *m* and parts attached, for filling and corking said bottles, as presented by the said revolving holder *k*, as set forth.

Second, the arrangement of the sliding bar *i*, talon 7, spring 6, and lever *h*, when combined with the revolving holder *k*, for giving motion to the said holder, and presenting the bottles to be filled in unison with the other movements of the machine, as specified.

Third, the lever *p* in combination with the crossheads *m* and *c*, and acting in the manner specified, to turn the yoke 10 over the cork as the crosshead *m* is raised, as specified.

Fourth, the vessel *r*, spout *s* and tipping dipper *t*, in combination with the revolving holder *k*, and corking apparatus, for supplying sirup or other liquid to the bottles in said holder *k*, immediately prior to the corking, as set forth.

No. 34,348.—N. W. CLARK, of Clarkston, Mich.—*Improvement in Apparatus for the manufacture of Salt.*—Patent dated February 11, 1862.—The several operations usually requiring the attention of three persons are so disposed as to require the attention of but one to take charge of the pump, the engine or boiler, and the salt block. The steam boiler is placed over the furnace in the salt block, so that one fire will serve to heat the steam-engine and evaporating pans. The waste heat of the boiler is also utilized.

Claim.—First, in combination with the salt block a heating reservoir, in and through which there is a constant flow of water, substantially as described.

Second, in combination with a steam boiler, placed over the furnace of the salt block, a heating reservoir F, placed over and projecting beyond said boiler, for the purpose of utilizing the otherwise wasted heat from and around the boiler, substantially as described.

Third, projecting the sides or ends of the pans over the sides or main flue of the salt block, for the purpose of affording a table on which the salt drawn or scraped from the pans may drain, and allow the drainings to run back into the pans, substantially as described.

Fourth, making the salt pans of metal and of wood, so arranged and combined as that while the saline water shall lie upon both, the metal only shall be exposed to the fire, or heated products of combustion, substantially as and for the purpose described.

Fifth, so arranging the flow-offs from one pan to the next adjacent one throughout the series as that the metal portions of the pans shall always be covered by the saline water in them, and thus prevent corrosion of the pans, and consequent destruction, as well as avoiding the staining of the water or discoloring of the salt, as set forth and explained.

No. 34,349.—S. A. CLEMENS, of Rockford, Ill.—*Improvement in Hemp Breakers.*—Patent dated February 11, 1862.—The flax or hemp to be broken is placed upon an endless feed apron, by the movement of which it is advanced under a circumferentially grooved roller which rests upon the apron, and thence between a pair of plain feed rollers, which pass it into a narrow space between two fixed bars, and thence between the opposite faces of an oscillating beater, the two breaking edges of which approximate the bars at unequal distances from the axis of the beater. From the beater the flax passes between the two gratings of a whipper, by the vibration of which the flax is further cleaned. An artificial current of air is directed across the machine above the whipper, to remove flax slives which are thrown upwards by the whippers.

Claim.—First, the method of breaking flax or other fibrous substances by a beater, constructed substantially as described, which oscillates upon an axis on one side of its centre, and has its breaking edges on the other side, extending at unequal distances from the axis, when combined with two bars, the breaking edges of which are in correspondence with those of the beater, substantially as described and for the purposes specified.

Second, a whipper, vibrating either upon an independent axis on one side or upon an axis common to it and the beater, when combined with a beater or pair of feed rollers, substantially as described and for the purpose specified.

Third, an air pipe *j'* with its discharging spout so arranged as to direct an artificial current of air across the machine, above the whipper, in connexion with the latter, substantially as described and for the purpose specified.

Fourth, an annular-grooved receiving roller *d*, resting over or upon an endless apron, and in connexion with a pair of plain pressure feed rollers, substantially as described and for the purpose specified.

No. 34,350.—ISAAC CRANDAL, of Middlefield, N. Y.—*Improvement in Pleasure Wagons.*—Patent dated February 11, 1862.—This invention is designed to combine in the construction of a pleasure wagon extreme lightness with strength and durability, as well as economy in cost.

Claim.—Forming the body A of the vehicle of two elastic parts *a a* attached, one part to the back axle C, and the other by a king bolt *b* to a spring E, which is fitted or suspended between the back parts of the thills F, the latter being attached permanently to the front axle G, and all arranged as and for the purpose set forth.

No. 34,351.—R. A. DANIELS, of Wayne, Ohio.—*Improvement in Fasteners for Hames.*—Patent dated February 11, 1862.—The bar is provided with two hooks, one of which is permanently attached to its end; the other is movable, and by means of a catch fitting in notches in the bar is readily suited to any size collar, the elasticity of the collar causing the catch to retain its position in the notch.

Claim.—The employment of the hook A and catch C in combination with the notched bar F and hook D, as shown, for the purpose set forth and described.

No. 34,352.—RUDOLPH DIRKS, of Philadelphia, Pa.—*Improvement in Sash Springs.*—Patent dated February 11, 1862.—This device is designed to retain the sash in an elevated position within the frame, thus preventing the sash from bearing against the frame.

Claim.—The spring G, composed of one piece of wire bent, attached to the sash, and arranged in respect to the grooves of the frame, as and for the purpose set forth.

No. 34,353.—W. H. DOANE, of Chicago, Ill.—*Improvement in Bed-plate of Stave Machine.*—Patent dated February 11, 1862.—The object of this invention is to obviate the necessity of providing a new wearing strip when a V crease or incision of such depth as interferes with the effective operation is formed in the strip. The wearing strip may be adjusted along its whole length so as to be planed off below the base of the crease or incision, and level with the top of the bed-plate, as often as may be necessary.

Claim.—A stave machine bed-plate A, with a gutter B, and incline scarf notches *a a*, in combination with a loosely-fitted wood or yielding strip D and an adjusting bar C, with inclined scarf notches *c* on its under side, substantially in the manner and for the purpose described.

No. 34,354.—O. D. ECKERSON and C. WATSON, of Middleburg, N. Y.—*Improvement in Water Elevators.*—Patent dated February 11, 1862.—One end of the strap is secured to the drum by means of a pin passing in a groove and through the flanges, so that the strap will run even and true. At each end of the groove cavities are formed in the drum to assist in securing the strap.

Claim.—The combination of the pin *s* with the flanged drum F, groove *a*, and cavities V, when arranged to operate in the manner and for the purpose described.

No. 34,355.—THADDEUS FAIRBANKS, of St. Johnsbury, Vt.—*Improvement in Weighing Apparatus.*—Patent dated February 11, 1862.—This device is designed to prevent the beam from oscillating or being thrown upwards and downwards while an article is being placed upon or removed from the scale, or during the transportation of the weighing apparatus from place to place.

Claim.—The combination and arrangement of the rotary check and its latching mechanism with the scale beam and its loop, in manner and so as to operate, substantially as specified.

No. 34,356.—J. FASIG, of West Salem, Ohio.—*Improvement in Hay Knives.*—Patent dated February 11, 1862.—The friction roller is designed to prevent the stubs of hay from interrupting the withdrawal of the knife-blade. The auxiliary handle is designed to facilitate the manipulation of the knife.

Claim.—First, the friction roller E, in combination with the blade A, constructed and operating as and for the purpose set forth.

Second, the auxiliary handle C, in combination with the rods B, blade A, and roller E, constructed, arranged, and operating as described.

No. 34,357.—W. L. FISH, of Newark, N. J.—*Improvement in Guides for Creasing Tucks and Plaits Preparatory to Sewing.*—Patent dated February 11, 1862.—This apparatus is designed for creasing cloth in the proper lines for the folding of tucks, to be sewed by hand or by a sewing machine, and may be attached to or used without a sewing machine.

Claim.—The combination of the rollers B D with the adjustable guide E and roller C, as and for the purpose shown and described.

No. 34,358.—THADDEUS FOWLER, of Richmond Valley, N. Y.—*Improved Deck-Ballast Boxes for Vessels.*—Patent dated February 11, 1862.—The invention consists in the employment of a crank and pinion with the caster wheel of a weight-box, used in trimming a vessel, so as to be easily moved by one man, thus dispensing with the services of a number of men, as usually required.

Claim.—The shaft *f*, pinion *g*, and handle I, in combination with the caster wheel *e*, as and for the purposes specified.

No. 34,359.—R. C. GLYDE, of Pittsburg, Pa.—*Improvement in Vessels for Transportation of Carbon and other Oils.*—Patent dated February 11, 1862.—This invention is designed to lessen the expense arising from the usual method of placing the oil in barrels.

Claim.—The use, for the transportation of oil in bulk, of boats divided by partitions into separate compartments, substantially in the manner described.

Also, the use, for the transportation of oil in bulk, of boats divided into compartments covered over with the deck heads, in the manner substantially as described.

No. 34,360.—J. W. GRIFFITHS, of Brooklyn, N. Y.—*Improvement in Ship Building.*—Patent dated February 11, 1862.—The invention consists in placing the bilge keelsons outside instead of inside of vessels, for the purpose of increasing their strength and carrying capacity, and preventing leeway and deep rolling.

Claim.—The projecting bilge strakes or keelsons on the outside of ships and other navigable vessels, forming rectangular channel ways, substantially as and for the purposes described.

No. 34,361.—R. H. HALL, of Owego, N. Y.—*Improvement in Axles for Wheel Vehicles.*—Patent dated February 11, 1862.—The invention consists in the method of applying a metal covering to the arms of wooden axles, for the purpose of attaining durability and economy in construction.

Claim.—The combination with axles A *a* of the upper casings *b b*, lower casing *c*, strip *d*, central threaded bolts *f f*, keys *g g*, and bands C D, all constructed, arranged, and applied in the manner and for the purposes shown and explained.

No. 34,362.—N. S. HARRYMAN, of Frankfort, Ind.—*Improvement in Cultivators.*—Patent dated February 11, 1862.—This invention consists of a combination of devices as named in the claim and shown in the engraving by which the machine is readily adjusted in the cultivation of growing crops.

Claim.—The combination of the several parts, constructed and operating as described, to wit: The bar G pivoted to the top of the rear standards, the frame F and standards E E, with the draught frame, all substantially as shown.

No. 34,363.—ISAAC HAYDEN, of Lawrence, Mass.—*Improvement in Machinery for Cleaning Cotton.*—Patent dated February 11, 1862.—The cotton being placed upon an endless belt is carried forward and passes between two fluted rollers, which deliver it to a beater, whence it is thrown against a rotating wire screen and then carried forward under rollers until it is blown through the bent trunks provided with screens and cells to machine No. 2, and so on to No. 3, by which means the dirt, dust, and refuse matter are separated from the cotton.

Claim.—First, connecting two or more of a series of machines for working cotton and other fibrous substances by means of trunks provided with woven screens and cells, substantially as described, so as to make each machine supply or feed the next machine to it through said trunk, substantially in the manner set forth.

Second, in machinery or apparatus for cleaning cotton or other fibrous substances, a trough or trunk, which is so bent or curved as to carry one part of said trunk over or under or by the side of the other part of the trunk, so as to obtain a greater length of trunk and a greater area of screening surface than could otherwise be effected in a room of a given size.

No. 34,364.—W. L. HAWKENS, of Lock Haven, Pa.—*Improvement in Stump Extractors.*—Patent dated February 11, 1862.—The suspended frame and its connexions are designed to gain speed at the expense of power from the commencement to the termination of the operation. The spring fulcra are so connected that the moving out of one shall tend to hold in the other, to insure certain action.

Claim.—First, a suspended or yielding frame C, having upon its opposite sides rack bars D, the steps 1, 2, 3, &c., of which not only recede from each other, but also increase in length or height as they rise, substantially as and for the purpose set forth.

Second, in combination with a lever that is worked in said rack bars, the spring-adjusting fulcra so connected together as to mutually tend to hold each other to the steps, substantially as described.

Third, in combination with the rack bars and lever, and their operative appliances, the slots or grooves *c* in said bars, and the guide pins in said lever, for controlling the lever as it rises or descends, substantially as described.

No. 34,365.—L. P. HAWERS, of New York, N. Y.—*Improvement in Machine for Cutting Veneers.*—Patent dated February 11, 1862.—This invention consists in a combination of parts for giving movements to the bolts from which the veneers are to be cut, and also in a peculiar feeding device for adjusting the knife to its work at the commencement of each cut, whereby the thickness of the veneers may be graduated as desired, and the knife also withdrawn from the bolt during the return movement of the latter, so that the edge of the knife will be preserved and much friction avoided; and thirdly, in the arrangement of dogs for securing the bolt to its bed, whereby the dogging of the bolt may be expeditiously performed and all irregularities of the bolt compensated for by a self-adjusting feature of the dogs.

Claim.—First, the combination of the adjustable slotted plates *k*, slides *i*, and eccentric I, with the bar C, bed L, and knife V, as shown and described.

Second, the arrangement of the screw X, connected with the carriage T and provided with the circular plate Y, having the arms *a' d'* attached, the former being provided with the segment rack *b'*, and the latter fitted between the stops *e' e'*, in connexion with the ratchet A', so fitted on screw X and the arm *g'*, having the pawl *h'* attached and fitted on a collar of ate Y, all being arranged in relation with each other and operated from the shaft Z, substantially as and for the purpose set forth.

Third, the arrangement, as shown and described, of the screws N Q with the nuts O R dogs P S, for the purpose of dogging the bolt to the bed L.

No. 34,366.—C. W. HELD, of Brooklyn, N. Y.—*Improved Enamel for Leather.*—Patent dated February 11, 1862.—The ingredients composing the enamel consist of unboiled linseed oil, Paris blue, gum-arabic, acetate of lead, litharge, Brunsen green, and gamboge.

Claim.—A lacquer for enamelling leather, &c., composed of the named ingredients, mixed together in about the proportion set forth.

No. 34,367.—JULIUS HOTCHKISS, of Middletown, Conn.—*Improvement in Skin Cartridge.*—Patent dated February 11, 1862.—The object of this invention is to prepare a cartridge which, while possessing the requisite strength to resist ordinary wear, and be in a measure impervious to water, will at the same time permit of the certain ignition of the powder enclosed by it, by the contact of flame with its outer surface, from burning priming, or by the contact of a percussion spark, and will also be carried from the barrel of the gun, at the moment of its discharge, in case it is unconsumed. The cartridge may or may not have a ball connected with it.

Claim.—In making a cartridge, so disposing the fillet or gut of which it is composed that the fibres of one portion of the gut shall transversely or spirally cross the fibres of another portion of the gut, substantially as described.

No. 34,368.—REUBEN HURD, of Spring Hill, Ill.—*Improved Device for Cutting the Noses of Swine, to prevent them from Rooting.*—Patent dated February 11, 1862.—This device is designed to supersede the ordinary practice of ringing the noses of swine.

Claim.—An implement or device formed of the levers A B, provided respectively with the cutter C and block D, arranged to operate as and for the purpose set forth.

No. 34,369.—F. G. JOHNSON, of Brooklyn, N. Y.—*Improvement in Velocipede Ice-Boats.*—Patent dated February 11, 1862.—The springs and open boxes are designed to produce elastic bearings for the shaft, so that the weight of the velocipede may fall principally upon the runners, and allow the wheel to drive the spurs the requisite distance into the ice. Disks are fastened to the sides of the wheel to obviate the jarring effect of the spurs, and also to prevent them from puncturing the ice too far.

Claim.—First, The combination of the runners L L M, and the spurred wheel E, attached to and combined with a suitable body, to be used as an ice velocipede, to be propelled by the feet or hands, substantially in the manner set forth.

Second, the springs *g g*, or their equivalents, in combination with the shaft F F and spurred wheel E, substantially in the manner and for the purposes described.

Third, the disks *a a a a*, combined with the periphery of the wheel E and the spurs *e e*, substantially in the manner and for the purposes set forth.

Fourth, The peculiar arrangement of the suspension-rods *j j j j* and the connecting-rods *c c c c* with the treadles *h h h h*, by which a person is enabled to sit on the seat S and exert great force upon the wheel E, for the purposes described.

No. 34,370.—MOSES MARSHALL, of Lowell, Mass.—*Improvement in Machines for Pegging Boots and Shoes.*—Patent dated February 11, 1862.—The peg-wood is fed by an automatic, intermittent feed on the descent of the plunger, and splits off the peg as the plunger rises. The knife is of such a thickness as to just occupy the space from which a peg is split; and as the knife splits off a peg, it forces it under the peg-driver, to be driven in on the next descent of the plunger. Pawls are made to pass through a plate or bar held in position by a spring, which latter serves to carry forward the pawls when they are forced in by the inclined edges of the holes in the plate, by which means they are caused to press upon the peg-wood and effect the feed.

Claim.—First, the intermittent, automatic peg feed, operating as the plunger descends, in combination with the splitting knife, operating as the plunger ascends, substantially in the manner and for the purposes described.

Second, a splitting knife, so constructed and arranged as to split off the peg and force it under the peg driver while the latter is up.

Third, the bar *q* operating as described in combination with the pawls *b*.

No. 34,371.—J. R. MASON, of Elgin, Ill.—*Improvement in Ploughs.*—Patent dated February 11, 1862.—The object of this invention is so to connect the main brace with the mould-board and land-side (the latter being provided with a rotary cutter) as to insure strength to, and support, the main portions of the plough at a point where the greatest strain is imposed.

Claim.—Constructing the main brace *f*, with a land-side termination *d*, and the cup *v*, and the ream socket *w2*, in combination with the landside B, cutter-plate C, and its base-enlarged axle *g*, the whole arranged and operating in the manner and for the purpose set forth.

No. 34,372.—GORDON MCNEIL, of Chestnut Hill, Pa.—*Improved Clothes-Dryer.*—Patent dated February 11, 1862.—This device is designed to be secured to a window and to project outwardly, the frame being so arranged as to be capable of adjustment to different sized windows.

Claim.—First, the combination of the bars A A′, extension bars D D′, strips B C, and thumb-screws *d*, when arranged to operate in the manner and for the purpose set forth.

Second, the manner of arranging the drying bars E, in the bars A A′, so as to spread apart at their outer ends, in combination with the set-screws *c*, for securing the same, substantially as described.

No. 34,373.—JACOB REESE, of Pittsburg, Pa.—*Improvement in Oil Tanks.*—Patent dated February 11, 1862.—This device is designed to obviate the difficulty, in the construction of tanks and other vessels for holding coal and carbon oil, of making them sufficiently tight to prevent their leaking.

Claim.—First, constructing tanks, or other vessels for holding coal and carbon oil or other light oils, with an outer casing around the sides of the oil vessel, so as to leave a space between the casing and the oil receptacle for the purpose of surrounding it with water, substantially in the manner and for the purposes set forth.

Second, so constructing the outer casing of oil tanks having double sides, forming a water space around the tank, as that the upper edge of the outer casing shall be higher than the level of the top of the main tank, for the purpose of allowing the oil leaking through the walls of the tank to return itself thereto in the manner described.

No. 34,374.—ORRIN NEWTON, of Pittsburg, Pa.—*Improvement in Dies for Manufacturing Brass Kettles.*—Patent dated February 11, 1862.—In making brass kettles by the method proposed, the metal is drawn out between dies which, during the operation of drawing, compress it so closely as to prevent "buckling," by which means an exact uniformity of thickness is secured. The drawing of the metal is commenced near the circumference, and gradually approaches the centre, so that the metal is forced completely through, and not merely into the dies.

Claim.—First, the use, in the manufacture of brass kettles and other articles of hollow ware from sheet metal, of plungers, around which the metal is worked, so constructed as to contract when the plunger is withdrawn in combination with annular dies, for the purpose of drawing out the metallic sheets into the required shape, substantially in the manner and for the purposes set forth.

Second, the combination of a conical centre piece *c*, and corresponding side pieces *a a′ a′*, and bottom piece *g*, to form a plunger for drawing or pressing sheet metal in or through dies, so that the diameter of the plunger will contract to allow of its being easily withdrawn from the metal on which it is operating or from the dies into or through which it was forced, substantially as described.

No. 34,375.—J. B. ROOT, of Battle Creek, Mich.—*Improved Rotary Engine.*—Patent dated February 11, 1862.—The packing rings are so constructed and applied within the cylinder heads, and in combination with the piston drum and packing and cylinder abutment, as to prevent the steam from passing the piston, drum, and pistons. Means are employed for pressing out the packing rings to proper contact with their opposed wearing surfaces, so that the steam is prevented from getting behind the said packing rings after they have been allowed to be pressed out by the wear of their faces.

Claim.—First, the packing ring G *h* G *h*, constructed with offsets, and applied and arranged within the cylinder heads and in combination with the drum C, piston packing *s e*, and cylinder abutment *g*, substantially as and for the purpose specified.

Second, the combination with a packing ring G, abutment piece *g*, or other packing piece of V-form, or having bevelled edges, as described, of triangular or wedge-shaped packing pieces *s s*, or *t t*, a follower *p* or *k*, and springs *r* or *l*, the whole arranged and operating substantially as specified.

Third, the packing pieces *s s*, applied in combination with the segment pieces *d d*, and with proper provision for the admission of steam behind them, substantially as and for the purpose specified.

No. 34,376.—J. B. ROOT, of Battle Creek, Mich.—*Improved Rotary Engine.*—Patent dated February 11, 1862.—This invention consists in a means of keeping the pistons out in contact with the inner periphery of the cylinder and radial to the centre thereof, in their revolutions with the eccentric drum; also, in a construction and mode of applying and securing the cylinder heads to the cylinder, whereby the pistons are prevented from binding, in case of unequal expansion of the cylinder; also, in an arrangement of a valve and stop in combination with a steam jacket around the cylinder, to provide for the warming up and expansion of the cylinder before starting the engine, as well as for keeping the cylinder warm during the operation. An arrangement of exhaust valves, used in connexion with such jacket, provides for the reversal of the engine.

Claim.—First, the combination of the rings *a a* attached to the pistons, and the hubs *c c* projecting inward from the cylinder heads in positions eccentric to the shaft and piston drum, but concentric with the cylinder, substantially as specified.

Second, the cylinder heads B B, constructed with rebates and fitted to the cylinder and to rebates in the rings G G or flanges secured to or formed on or in the cylinder, substantially as and for the purpose described.

Third, the steam jacket H H′, with its two compartments communicating with the cylinder ports *l l′*, its partition *k*, passages *m m′*, and valve I, all constructed and arranged and operating substantially as set forth.

Fourth, the two ports *n n′* and valves *p p′*, combined with the cylinder and steam jacket H H′, substantially as and for the purpose described.

Fifth, the linings *b b*, applied in combination with the rings *a a* of the pistons and the hubs *c c* of the cylinder heads, substantially as and for the purpose specified.

No. 34,377.—A. F. SMITH, of Norwich, Conn.—*Improvement in Trucks for Locomotives.*—Patent dated February 11, 1862.—Lateral motion is allowed the truck beneath the bolster, which latter takes the weight of the engine in the centre. The bolster is suspended at the ends by bars attached to the moving ends of the pendant links that are attached by bolts at their upper ends to the brackets on the frame, thus allowing the forward part of the engine to travel as a tangent to the curve, while the axles of the drivers are parallel, or nearly so, to the radial line of the curve.

Claim.—The employment, in a locomotive engine, of a truck or pilot wheels fitted with the pendant links *o o*, to allow of lateral motion to the engine as specified, whereby the drivers of said engine are allowed to remain correctly on the track, in consequence of the lateral motion of the truck, allowed for by said pendant links, when running on a curve, as set forth.

No. 34,378.—EDWARD SPENCER, of St. Louis, Mo.—*Improvement in Railroad Ticket Stamp.*—Patent dated February 11, 1862.—A ribbon is wound from one roller upon the other, and passes over the face of the type, and being saturated with ink, affords a constant supply to the type. The operation of the instrument is designed to print a card or ticket and cut it at the same time.

Claim.—Combining the rollers *e e*, the die *d*, and the ribbon *f*, with the jaws of the pincers, substantially in the manner described for the purpose specified.

No. 34,379.—W. O. STRONG, of Detroit, Mich.—*Improved Device for Distributing Grain in Elevator Bins.*—Patent dated February 11, 1862.—The grain in falling through the tube strikes upon the cones, by which it is deflected and caused to fall in a shower over the bottom of the bin. It is thus evenly distributed, regardless of the weight and size of the particles. The tendency of a single fall being to separate the large and heavy from the small and lighter grain.

Claim.—The even distribution of grain in bins by means of the pipe E F, made either telescopic or fixed, and the truncated cones G G G, or their equivalents, arranged substantially in the manner and for the purpose set forth.

No. 34,380.—L. U. STUART, of Brooklyn, N. Y.—*Improvement in Bellows.*—Patent dated February 11, 1862.—This invention is particularly applicable to organ bellows, and consists in providing an additional reservoir of wind with a movable part to be added to the ordinary bellows, and connected with the same by a suitable tube, or air trunk, in such a manner that the wind from the bellows is admitted by the air trunk into the interior of said reservoir, and so arranged that the pressure of the air acting on the said movable part of the additional reservoir, is transmitted to and made to act upon the top of the bellows, producing an additional pressure thereon.

Claim.—The arrangement of a reservoir C, or its equivalent, with a movable part *c*, in combination with an ordinary bellows A, and connecting with the same by an air trunk D, or its equivalent, as described, and so arranged that the force or power of the said movable part *c* is transmitted to the bellows and made to act upon the same as an additional pressure.

No. 34,381.—S. T. THOMAS, of Laconia, N. H.—*Improvement in Fancy Looms.*—Patent dated February 11, 1862.—The object of this invention is, first, to avoid sudden concussion (that takes place) on the stoppage of a loom. When the stoppage is caused by the breaking of the filling the loom is instantly stopped by a brake, so that the main crank makes but about half a revolution, while the slippers commonly used allow the crank to continue in motion, and the shuttle makes several shots before the loom is stopped.

Second, an arrangement of devices for changing the colors of the filling or weft. The mode of operating the "let-off" and "take-up" motions is designed not only to keep the warp at a uniform tension, but also to prevent the loom from making thin places in the fabric, because if the reed does not strike the cloth with sufficient force to drive the fighter back to a given point, the "take-up" ceases to draw the warp forward.

Claim.—First, the mode of partially overcoming the momentum of the lay by means of the inclined plane bent lever 22, brake and flange, or their equivalents, previous to the final arrest of the dagger by a fixed stop.

Second, the mode of elevating the shuttle-box levers by means of the slide wedges traversing in single or double guides and operated by the draw wires and series of connected levers, combined with the series of star cams and ratchet, acting on one or both sides of the loom, as set forth.

Third, the combined action of two or more wedges or inclined planes, one above the other, for elevating the shuttle-box, by means of which the extreme distance traversed by the box is about equal to the sum of the height of the large ends of the wedges.

Fourth, the arresting or governing of the feed or take-up motion that operates the cloth beam, by means of the action of the reed and flighter, the cloth beam and flighter being connected by the lever 315, slide 313, pawl 314, and ratchet 431, or their equivalents, as described.

No. 34,382.—W. H. THOMPSON, of Cleveland, Ohio.—*Improvement in Railroad Switch.*—Patent dated February 11, 1862.—A stand of cast iron is placed firmly over the switch bar; from the stand rises a signal post, which is made to rotate by means of a slotted arm, operated by a pin projecting from a stud on the switch bar. A movement of the lever causes the signal to turn in any required direction.

Claim.—The stand A, signal post I, slotted arm M, placed beneath the base A, and stud N, upon the switch bar B, when these several parts are arranged, constructed and operated as and for the purpose set forth.

No. 34,383.—JAMES VINCENT and SAMUEL LESLIE, of Quasqueton, Iowa.—*Improvement in Churns.*—Patent dated February 11, 1862.—The double comb-breaker consists of two combs placed at right angles to each other, surmounted by a shield. The rotations of the churn gives the cream two motions, one centrifugal and the other vertical, throwing the cream as it rises forcibly against the main comb, a portion passing through the interstices thereof, while the larger portion is broken and descends to the bottom of the vessel.

Claim.—The double comb-breaker F H and cap E, with the vessel J and revolving platform B, combined and operating in the manner substantially as described.

No. 34,384.—MILAN WATERBURY, of Polo, Ill.—*Improvement in Car Coupling.*—Patent dated February 11, 1862.—The catches are so combined with a spring buffer that they may recede with the buffers, but at the same time be interlocked; while the recoil of the springs behind the buffers, when the train is started, will prevent any sudden strain upon the coupling, and also prevent the jaws or catches from being separated.

Claim.—So combining the hooks or catches E E with the spring buffers C C, as that whilst they move longitudinally with the buffers, they may have a lateral motion independent of them, substantially as and for the purpose described.

No. 34,385.—J. S. WILLIAMS, of Philadelphia, Pa.—*Improvement in Camp Stoves.*—Patent dated February 11, 1862.—The outer and inner casings are composed of two pieces, hinged to each other. A detachable cover, provided with two flanges, fits over the upper edges of the outer casing. The several parts combined are designed to be used either as a chest, a stove, or an oven. A folding shelf is arranged for suspension to the edge of the cover by means of hooks.

Claim.—First, the outer casing A, the inner casing D, the latter being composed of two pieces, hinged to each other, as set forth, in combination with the cover E, its upper flange i, and lower flange e, the whole being constructed and arranged as set forth for the purpose specified.

Second, the shelf G, and the plates H and H′, with their hooked ends and projections m, the whole being constructed and arranged for suspension to the flange i of the cover, as and for the purpose set forth.

No. 34,386.—R. P. WILSON, of Cleveland, Ohio.—*Improved Washing Machine.*—Patent dated February 11, 1862.—The vessel containing the clothing is mounted on trunnions, and as it revolves the clothes are precipitated from one end to the other, thus subjecting them alternately to a rubbing and pounding action; the rubbing being effected by the clothes sliding over the corrugated surface on one end.

Claim.—The semi-spherical protuberances D, and corrugated convex rubber C, with the air-tight cylinder or barrel A, arranged to revolve in the direction of its length, when combined, arranged, and operating in the manner described.

No. 34,387.—B. W. WOOSTER, of Albany, N. Y.—*Improvement in Handles for Coffins.*—Patent dated February 11, 1862.—The handles are hung to a loop which is screwed into the wood independently of the plate, the latter being subsequently fixed to the wood, for the purpose of securing strength and allowing variously shaped and differently ornamented plates to one form of handle.

Claim.—The combination of the handle H and its loop E, constructed as described, with the ornamental plate P, for the purpose set forth.

No. 34,388.—D. T. YEAKEL, of Lafayette, Ind.—*Improvement in Breech-loading Ordnance.*—Patent dated February 11, 1862.—The breech cap is hinged to a shaft or arm, the latter being made to revolve upon the breech of the gun, in connection with a revolving hoop behind the trunnions. The cap being screwed on is retained in position by means of a self-adjusting ratchet and spring.

Claim.—The combination and arrangement of the hinged screw cap E, shaft D, hoop a, ratchet A, stop L, and breech A, constructed and operated substantially as described.

No. 34,389.—S. R. ANDRES, of Troy, N. Y., and MCDONOUGH BUCKLIN, of New York, N. Y.—*Improvement in Articles of Food made of Sweet Potatoes.*—Patent dated February 11, 1862.—The object of this invention is to preserve the sweet potato by desiccation, so that it can be kept or transported to any part of the world.

Claim.—Desiccated cooked sweet potatoes, as a new article of manufacture, made as described or in any equivalent way.

No. 34,390.—T. J. BARRON, Brooklyn, N. Y., assignor to JAS. HORNER, of New York, N. Y.—*Improvement in Lamps.*—Patent dated February 11, 1862.—Glass or burnt clay being non-conductors of heat, the oil in the tubes of these substances is prevented from being volatilized too rapidly or in greater proportions than the supply of oxygen requires, thus insuring perfect combustion. The upper end of the tube is contracted for the purpose of preventing the wick from crusting and generating an excess of vapor.

Claim.—The employment or use in a lamp for burning coal-oils, or other similar hydrocarbons, of a wick tube D, constructed of glass or burnt clay as and for the purpose specified.

Further, having the tube D, constructed with a contracted orifice a, as and for the purpose set forth.

No. 34,391.—W. H. BUCKLAND, of Glamorgan Co., Great Britain, assignor to EMORY RYDER, of New York, N. Y.—*Improved Mode of Preparing Peat.*—Ante-dated, September 30, 1859.—Rough peat from the bog is thrown into a hopper, from whence it is carried down into a conical straining vessel by the rotation of a conical screw, by which means the pasty and decomposed parts of the peat will be forced through the perforated sides of the conical chamber. The pieces are then delivered upon an inclined plane which may be heated, or into a hot-air chamber. The expressed mass may then be moulded and cut into convenient lengths for drying and hardening.

Claim.—Separating the decomposed from the fibrous or undecomposed portions of the peat by straining or keeping back the latter while the decomposed portions of the peat are forced through the perforated sides of the straining vessel or receptacle, substantially in the manner and for the purpose specified.

No. 34,392.—D. H. CHAMBERLAIN, of West Roxbury, Mass., assignor to Himself and JOHN HARTSHORN, Boston, Mass.—*Improved Apparatus for Generating Vapors.*—Patent dated February 11, 1862.—The fluid is presented to the heat on a series of cloth or felt covered partitions which are supplied with the necessary amount of fluid to keep them properly saturated, by means of an endless belt of felt or other suitable material passed by a movement of the machinery, from the fluid reservoir to the generator, through tubes. The belt passes around perforated cylinders, and the fluid falls into the cylinders, and, passing through the holes, saturates the belt, by which latter it is carried to the generator, and coming in contact in a finely divided state, with the heat radiated from the hot partition plates and the inner surface of the cylinder, the fluid is quickly evaporized.

Claim.—First, in combination with a reservoir for containing the fluid, and a generator for evaporating it, the endless belt D and tubes L for conveying the fluid to the generator, substantially as described.

Second, the generator B, with its partition b, in combination with the cylinder C, and its covered plates g, substantially as set forth.

Third, the reservoir G in combination with the cylinder K, substantially as specified.

No. 34,393.—JAMES CLAYTON and ABRAHAM CAMPBELL, of Brooklyn, N. Y., assignors to ROOT'S ROTARY STEAM-ENGINE CO., of New York, N. Y.—*Improved Rotary Engine.*—Patent dated February 11, 1862.—The rings or segments are made of two thin pieces of sheet copper or other flexible metal, united at their edges, to form a steam chamber between them; the segments are furnished with short nozzles, which enter orifices provided in their respective rings, for conveying steam from the interior of the cylinder into the said segments. Hollow expanding packing pieces are arranged in a cavity behind the abutment, and serve to keep the abutment up to the piston drum. The packing pieces communicate with the cylinder through separate orifices in the abutment. Cock valves are fitted to the steam jacket, one opposite each of the ports, so constructed and applied as to open and close their respective ports, without obstructing the passage of the steam round the jacket. A third port allows the escape of any steam that may be left in front of the pistons, after they have passed the other two ports.

Claim.—First, the hollow expanding metallic packing composed of rings or segments G G′ G* G′*, or strips P P′, constructed substantially as described and applied between the cylinder heads and their packing rings behind the abutments or in any other part of a rotary engine, to operate substantially as set forth.

Second, the arrangement of the orifices in the segments G G′ G* G′*, with respect to the steam spaces of the cylinder, substantially as described and for the purpose set forth.

Third, the arrangement of the two hollow expanding pieces *p p'*, for packing the abutment, one having communication with the cylinder on one, and the other on the other side of the abutment bearing, substantially as specified.

Fourth, the employment, in combination with three or more pistons and a steam jacket surrounding the cylinder, of two eduction ports *n n'*, fitted with separate valves N N', and a third eduction port *l*, under the reversing valve, the latter port to continue the eduction after the port *n* or *n'* is closed, substantially as herein specified.

No. 34,394.—JOHN CRITCHERSON, assignor to Himself and G. P. Towle, of Boston, Mass.—*Improved Roller for Clothes-wringer.*—Patent dated February 11, 1862.—The metal disks, being imbedded by pressure into the disks of felt, serve to keep the latter from slipping, and give firmness to the roller. The shaft upon which the disks are secured is made square.

Claim.—As a new article of manufacture, a roller for clothes-wringers, consisting of disks of felt C, with interposed disks of thin metal *d*, arranged on a polygonal shaft A, and secured thereon in a compressed form by collars B *b*, the whole operating in the manner and for the purpose substantially as described.

No. 34,395.—C. A. CUMMINGS and F. M. SWALLOW, of Worcester, Mass.—*Improved Clothes-wringer.*—Patent dated February 11, 1862.—Straps are attached to the projecting ends of the upper roller shaft; to the lower end of the straps are attached hook rods connected to a spring, which latter is placed under the base that supports the standards, and admits of adjustment as the clothes pass between the rollers.

Claim.—Making the rollers self-adjustable by means of the straps and spring, when constructed and operating in the manner and for the purposes as set forth and described.

No. 34,396.—L. S. FAIRCHILD, of Cleveland, Ohio, assignor to Himself, ALONZO HAZEN, A. M. HAZEN, of Cleveland, Ohio, and A. J. WHITING, of Perry, Ohio.—*Improvement in Shingle Machines.*—Patent dated February 11, 1862.—As the knives move up on the slide a dog strikes against a catch in a cam, which turns the shaft with the screws half way round, thus operating the gears and moving out the block. A spring pressing against an elongated cam on the end of the shaft prevents the latter from reversing its motion. On each side of the inner cam there is a catch, so that every time the knife is raised the shaft is turned half way round by the action of the dog on the cam. The dog is connected to the pinion by an arm. The screws are so placed on the shaft that when one gear is operated by the screw of the greater lead the other will be operated by the lesser lead; one gear will be thrown round further than the other alternately, thus moving one end of the block out beyond the other, cutting it every time at an opposite angle, the inclination or lead of the first half of the screw being much less than that of the other half.

Claim.—The intermittent screws O and P, gears M and N, cam R, dog S, and cam E', when arranged and operating, substantially in the manner and for the purposes set forth.

Also, the lever V, spring J', segment gear U, in combination with the dog S, and cam E', and spring I', in the manner and for the purpose described.

No. 34,397.—J. LOFOENDAHL, assignor to Himself and N. P. LINDERGREEN, of Boston, Mass.—*Improvement in Spool-holding Devices.*—Patent dated February 11, 1862.—This invention consists in attaching one or more hooks to a bracelet or wristband for the purpose of holding the balls or spools of yarn, the bracelet or wristband being placed on the arm of the person knitting, and the ball or spool suspended to the bracelet or wristband by the hook or hooks, so that the yarn may freely unwind from the ball or spool during the process of knitting.

Claim.—The construction of the bracelet or wristband A and hooks B C, either or both to form a new and useful implement or device for the purpose set forth.

No. 34,398.—J. W. WHEELER, assignor to H. H. WHEELER, of Cleveland, Ohio.—*Improvement in Water Elevators.*—Patent dated February 11, 1862.—The object of this device is to prevent the rope from slipping on the wheel, caused by ice or snow. The corrugations serve to break up the ice, which is then pressed through the opening in the wheel.

Claim.—A wheel or pulley having a V-shaped channel upon its periphery to receive the chain or rope, the inclined sides A of said channel being corrugated laterally and the bottom C open, as and for the purpose described.

No. 34,399.—J. C. ADAMS, of Baltimore, Md.—*Improvement in Combined House, Bridge, Boat, and Wagon Body.*—Patent dated February 18, 1862.—This invention consists in so constructing and arranging the sides and pieces and floors that they may be readily formed into houses The roof is so constructed that it can be used as a wagon body or boat. When desirable to construct a bridge, the parts forming the boat are placed side by side, and the boards for the house laid upon sleepers placed on the boats similar to a pontoon bridge.

Claim.—The described house, or its equivalent, which can be converted into the uses set forth.

No. 34,400.—J. S. BARDEN, of New Haven, Conn.—*Improvement in Crank and Cross-head Connexions for Steam Engines.*—Patent dated February 18, 1862.—The cross-head is composed of two parallel grooved bars and three rollers, two of which are provided with flanches to extend into the two grooves of each of the said bars, the object being to enable the piston rod of a stationary cylinder of a steam engine to be applied to a crank of the driving shaft without the intervention of a connecting rod, such as is commonly employed. The semi-tubes enable the rollers to be passed over one of the arms or thicker portions of a bell crank when necessary in order to apply the rollers to the neck of such crank.

Claim.—The combination and arrangement of the flanches *e e*, grooves *i i*, and rail bearings *k l m*, with the three friction rollers, and the cross-head A, the whole being applied to a crank and a piston rod, and to operate substantially as set forth.

Also, the combination of the semi-tubes F G, with the rollers, when applied, and to operate within a rail frame A, as described.

No. 34,401.—C. H. BURGESS, 2d, of Sandwich, Mass.—*Improvement in Doors for Reverberatory and other Furnaces.*—Patent dated February 18, 1862.—The doors of the furnaces are double and made water-tight, except at the top, which may be left entirely open. The water is kept at a certain height, and fed by a pipe leading from a cold water reservoir, the object being to prevent the door from warping or other injury from excessive heat.

Claim.—Constructing the doors of reverberatory and other furnaces, with the water space described, in combination with the arrangement of the pipes essentially as set forth.

No. 34,402.—M. L. CALLENDER, of New York, N. Y.—*Improvement in Hydro-carbon Burners.*—Patent dated February 18, 1862.—The deflector is held in position in the cone by means of springs, and is provided with a metallic shield to protect the top of the wick tube from the flame. When a chimney is used the deflector is removed. The length of the spiral coil is designed to absorb the heat imparted to the shield, &c.

Claim.—First, the relative arrangement of the cone *d*, and the interior deflector I, with its shield *b*, for the purpose of burning hydro-carbon oils with or without a chimney in the manner specified.

Second, a burner so constructed as to increase the length of its metallic connexion between the flame and the body of the lamp and the wick tube without adding materially to its height, using for that purpose the spiral coil B B', on which the cone *d* is mounted.

Third, the new and cheap method of forming the levers *s s'* from the metal of which the body of the burner itself is constructed, by which means the springs to hold the chimney in position and the body of the burner are made simultaneously from one piece of metal.

No. 34,403.—PAUL CASAMAJOR, of New York, N. Y.—*Improved Apparatus for Making Vinegar.*—Patent dated February 18, 1862.—An artificial draught is created by a heated flue connected to the cask by means of a pipe which enters a hollow axle communicating by openings in the axle with the interior of the cask at each end. The cask is filled with wood shavings or other similar porous material. The liquid to be converted into vinegar is then poured in and rotary motion given to the cask, thus thoroughly wetting the shavings. Air is then drawn in, and, passing through the wet shavings, turns into vinegar, by oxidation, the liquid in which they are soaked.

Claim.—First, the method of creating an artificial draught by inspiration or suction, substantially as described and for the purpose set forth.

Second, the rotary apparatus, substantially as described and for the purpose set forth.

No. 34,404.—J. CLARKE and D. FRENCH, of Syracuse, N. Y.—*Improved Composition for Pavements, Roofing, and other purposes.*—Patent dated February 18, 1862.—This composition consists of broken stone, gravel, coarse sand, coal ashes, coal tar, pulverized rosin, quick-lime, hydraulic cement, and leach ashes. The parts being thoroughly amalgamated, the composition is applied in a plastic state, and hardens in drying.

Claim.—The described composition, substantially as and for the purposes set forth.

No. 34,405.—M. C. COGSWELL and A. G. WILLIAMS, of Buffalo, N. Y.—*Improvement in Grain Driers.*—Patent dated February 18, 1862.—The head is made double, so as to form a capacious air chamber, and is connected, and revolves upon a tubular or hollow journal, through which air is admitted to the said chamber and thence to the perforated distributing pipes. Buckets are used for lifting, stirring up, and showering the grain in the case.

Claim.—First, the double head c, having an air chamber C' and hollow journal D, for the purposes and substantially as described.

Second, the combination of the double head C, with perforated distributing air tubes F, for the purposes and substantially as described.

Third, the combination of the double head C, hollow journal D, distributing air pipes F, and lifting buckets I, with the case A, for the purposes and substantially as set forth.

No. 34,406.—JAMES COLLINS, of Farmington, Ill.—*Improvement in Cultivators.*—Patent dated February 18, 1862.—Two pendant vertical draught rods are attached to the outer ends of the forward cross-bar, said rods being connected to the axle by braces, and projecting down a sufficient distance to permit the plough beams to work in a horisontal position. A hinged clevis is attached to the front end of each plough beam, and so connected with the

vertical rods as to afford free lateral and vertical motion to the plough, and prevent their rocking or deviation from a vertical position. Vertical crank levers are attached to the axle, and being threaded at their lower ends, admit of adjustment by means of a nut.

Claim.—First, the combination of the perpendicular draught rods *f f'* depending from the transverse bar *a a'* and braces *h h*, extending back from the lower part of the said draught rods to the axle-tree, all constructed and arranged as described and for the purposes stated.

Second, the combination of the clevis *g* and draught rods *f f*, when constructed and operating as and for the purposes set forth.

Third, the crank levers *k k'* and adjusting nuts *x*, constructed and arranged in connexion with a corn plough on wheels, in the manner and for the purposes set forth.

Fourth, the combination of the cross-bar *a a'*, draught rods *f f'*, braces *h h h'*, clevis *g*, adjusting levers *k k'* and *p p'*, curved axle-tree *s s'*, and seat *m*, all substantially as and for the purposes set forth.

No. 34,407.—HANNAH D. CONRAD, of Dayton, Ohio.—*Improvement in Setting and Threading Needles in Sewing Machines.*—Patent dated February 18, 1862.—The device consists of a flat bar of metal, with a hole in one end, by which it is pivoted or hinged to the bar that carries the needle, or to the socket in which the needle bar traverses. At the other end is a hub with a conical or funnel-shaped perforation, to conduct the thread to the eye of the needle. A notch is cut on one side of the hub into the conical perforation through which the thread passes. A stop is made on the side of the threader for the end of the needle bar to rest on, when the device is applied to the socket in which the needle bar traverses.

Claim.—First, in combination with a sewing machine, the improved needle threader and setter described, pivoted or hinged to the needle arm or bar to the needle bar socket.

Second, and, in combination with the improved needle threader and setter pivoted or hinged, as described, the stop *k*, for the purposes set forth.

Third, in combination with the funnel F, the screw J, for adjusting the eyes of needles of different sizes opposite the termination of the funnel.

No. 34,408.—E. T. COVELL, of New Bedford, Mass.—*Improvement in Lamps.*—Patent dated February 18, 1862.—The slitted deflector surmounts a perforated thimble, which supports the lamp-glass, and is connected by radial arms, with an inner band embracing the upper end of the casing tube so loosely that it can be freely turned upon the same, so that a smoky flame can be prevented by partially turning the said thimble upon the tube.

Claim.—First, placing the slitted deflector *d* over the wick tubes *g* and *f*, for the purpose of enabling said lamp to produce a flat flame from a tubular wick, substantially as represented; but this only when air is permitted to flow through the space within the wick tube *g*, for the purpose of aiding in the production of a more perfect combustion than has ever before been produced in an oil-lamp.

Second, when a slitted deflector is placed over the tubular wick of a lamp, there is also claimed the supporting the said deflector in such a manner that it can be turned to any desired position, independently of the wick tubes of said lamp, substantially as set forth.

No. 34,409.—HENRY CRAIG, of Cleveland, Ohio.—*Improvement in Microscopes.*—Patent dated February 18, 1862.—The construction of the lens requires considerable manipulation, for a description of which reference must be had to the specification.

Claim.—The lens E, when constructed as set forth.

No. 34,410.—A. B. DAVIS and THOMAS CROOK, jr., of Philadelphia, Pa.—*Improvement in Corn-shellers.*—Patent dated February 18, 1862.—Angular strips or ribs are cast or otherwise secured to the plate wheel, and are designed to turn the point of the cob away from the face of the wheel, and to direct it towards the inclined and ribbed peripheries of the stripper wheels, so as to remove the kernels from the point of the cob.

Claim.—The angular strip *a* on the wheel K, arranged in respect to the stripper wheels L and L', substantially as set forth for the purpose specified.

No. 34,411.—G. B. DAVIS, of Chicago, Ill.—*Improvement in Water Filters.*—Patent dated February 18, 1862.—The false bottom, having a hole in its centre for the passage of water, divides the tub into two compartments, the lower one containing the filtered water. Over the false bottom is a strainer, and over the strainer is secured a filtering case, perforated at its sides, and filled with a filtering material consisting of fine charcoal and coarse sand. A metallic perforated cone extends up in the centre of the filter. An air tube extends from the top to the lower compartment, to admit of a free discharge of water and the escape of air as the part fills with water. The impurities are drawn off from the upper compartment by means of a pipe.

Claim.—First, the tub or pail A, divided into two compartments C D by a horizontal partition or false bottom B, in combination with the filter case G, perforated at its side or sides, provided with an internal perforated cone *d*, and fitted or arranged on the false bottom B, to operate substantially as and for the purpose set forth.

Second, the combination of the partition or false bottom B in tub A, filter case G, cocks E K, and air tube J, when all arranged substantially as and for the purpose specified.

Third, the combination of a double-walled tub or pail A with the false bottom B and filter case G, arranged as shown to form combined filter and cooler, as set forth.

No. 34,412.—FRANCIS DELUCE, of Boston, Mass.—*Improved Centring Implement.*—Patent dated February 18, 1862.—The chuck which carries the drill or instrument which forms the centre hole is provided with a concave or conical guide, which envelops the drill, and is capable of yielding or sliding back upon or over the drill, so as to expose the cutting part thereof, to permit it to perform its function, the purpose of said concave or conical piece being the automatic adjustment of the cylindrical or of the prismatic piece to be operated upon, so that its axis will be practically a continuation of the axial of the line.

Claim.—The implement for drilling central holes, constructed and operating substantially as set forth. Also, in combination with the said improvement, the means described, or the equivalent thereof, for changing the relative position of the drill.

No. 34,413.—AUGUSTUS DESTOUY, of New York, N. Y.—*Improvement in Sewing Machines.*—Patent dated February 18, 1862.—The awl being attached to a lever, is curved concentrically with the shaft upon which it is mounted. The other end of the lever from the awl is provided with a curved slot, in which a pin plays, causing motion to the lever and awl, the pin being actuated eccentrically from the main gear. The forked needle is designed to penetrate, but not pierce, and acts in conjunction with the awl, its motion being vibratory in one place. The point of the needle is forked in such a manner as to seize within its recess the under thread when stretched across the opening in the support. The shank of the rotary hook is shaped to conform to the stationary thread case, around which it is caused to travel, and the hook is arranged to operate in conjunction with the forked needle, so that the thread carried through the material to be sewed is seized by it, and in the form of a loop carried over and around the thread case. The thread case is composed of two shells hinged together, and open at one side, so that the spool contained in the same may be seen. One of the shells is perforated for the passage of the thread. The case is held loosely in position by means of two side cups. The thread, when taken off the forked needle, is carried over and around the case by passing between its holding cups.

Claim.—First, a machine provided with a table or support for the material to be sewed to rest upon, and a feeding and thread-controlling device.

Second, the combination of the following elements constituting a sewing mechanism adapted to the manufacture of boots and other like articles, viz: an awl and a forked needle, the former for piercing the material, and the latter to carry the under thread through it and a stationary thread case and a rotating hook, the former for holding the upper thread, and the latter to seize and carry the under thread loop over and around the thread case, so as to lock in the thread fed out from said case, the whole being arranged substantially as described, to operate in the manner and for the purposes set forth.

No. 34,414.—WILLIAM H. DEVALIN, of Sacramento, Cal.—*Improvement in Rotary Engines.*—Patent dated February 18, 1862.—The pistons, four in number, are caused to rotate and slide radially, being fitted in boxes provided for their reception in the piston-wheel. The pistons have each a rod which passes through a steam-tight stuffing box, and also a cross-head, furnished with friction rollers, at or near its end, to run in grooves in stationary cams in the side of the cylinder. The cross-heads also work in grooves radial to the main shaft, in guide-arms bolted to the outside of the piston-wheel. By the rotary motion of the piston-wheel and the action of the cams the inward and outward or radial movement of the pistons enables them to pass the abutments and return to their operative positions.

Claim.—The combination of the pistons H, boxes I, rods *g*, cross-heads J, rollers *j*, cams K *k*, and springs *i*, all constructed, arranged, and operating in the manner and for the purposes shown and explained.

No. 34,415.—JOSEPH DODIN, of New York, N. Y.—*Improvement in Lamps.*—Patent dated February 18, 1862.—The burner consists of a single plate of metal, so formed that when bent in proper position the edges are readily fastened together, and the lower end fitted to the lamp-tube.

Claim.—The particular shape of the plate of metal combining the mode of locking together at A, and clasping the tube at *n*, substantially as described.

No. 34,416.—J. H. DOUGHTY, of Adamsville, Ohio.—*Improvement in Churns.*—Patent dated February 18, 1862.—As the dasher rises the cream is drawn up through the lower curved channels and the valve opening, and fills the cylinder. On the descent of the dasher the valve closes, and the cream is forced through the small channels above the valve chamber. The cream being taken in only at the lower part of the cylinder, the butter collects in a mass at the top, free from further agitation.

Claim.—The combination of the channels *i k*, formed and arranged as described, when used in connexion with the cylinder G, piston F', and valve J, arranged and operating substantially as and for the purposes set forth.

No. 34,417.—THADDEUS FAIRBANKS, of St. Johnsbury, Vt.—*Improvement in Platform Scales.*—Patent dated February 18, 1862.—The weight on the main scale indicates the number of even pounds, and the excess or fractional parts of a pound or ounces is obtained by the upper and smaller scale and weight. The superior lever is arranged to project towards one corner of the stand, upon which corner is placed a hollow post provided with two arms, one of which supports the knife edges of the scale beam, and the other sustains a staple, into which the lesser arm of the beam is projected.

Claim.—The described application or arrangement of a fractional scale arm H, and a movable counterbalance weight I, relatively to the scale beam, and to operate therewith, substantially as specified.

Also, the arrangement of the superior lever C and the post F, with respect to the stand or base of the platform of the scale.

No. 34,418.—HENRY FARMER, of Pontiac, Mich.—*Improvement in Vegetable and Root Cutters.*—Patent dated February 18, 1862.—The periphery of the cylinder is formed of two pieces of sheet metal; one end of each of these pieces is secured between and near the rims of the heads, and gradually drops towards the axle as it passes round. The ends are at a little distance from each other, and between these ends are hinged and secured adjustable sections, to which knives are attached. The roots are cut by revolving the cylinder.

Claim.—First, the use of the cylinder C, constructed in the manner and for the purpose set forth.

Second, the employment of the sections E, hinged and provided with knives *a a*, as and for the purposes specified.

No. 34,419.—ALBERT FULLER, of Cincinnati, Ohio.—*Improvement in Faucets.*—Patent dated February 18, 1862.—This device is designed to prevent the fluid from coming in contact with the working parts of the faucet, thereby dispensing with grooved joints and packing. A metallic conoidal tube placed within the elastic tube so expands the latter as to fill and press it against the outer cylinder of the faucet, and secures it in place.

Claim.—First, a faucet having an interior elastic tube, by the compression and expansion of which the flow of liquid may be regulated or prevented, substantially as described.

Second, the application of the conoidal tube D to the elastic tube C, for the purpose of securing the latter, substantially as described.

No. 34,420.—O. T. GILMAN, of Washington, D. C.—*Improvement in Tools.*—Patent dated February 18, 1862.—This device is designed to combine a hammer, pair of pincers, and a wrench in one tool. The handle of the hammer passes through an opening in the claw, which is then pivoted to the hammer. A nut or screwhead may be embraced in the opening between the claw and joint in forming a wrench.

Claim.—The employment of the claw C, in combination with hammer A, for forming three tools in one, substantially as specified.

No. 34,421.—E. D. GOULD, of Lockport, N. Y.—*Improvement in Channelling Tools for Harness-makers.*—Patent dated February 18, 1862.—Two knives are placed in grooves at one end of a piece of wood, and confined by metallic plates. Slots in the knives, through which a set-screw passes into a nut, admit of the knives being adjusted in and out of the sheath. On the other end is a knife set obliquely, for channelling bevelled and round leather work. By being formed in a curve in a recess, the point is made to project more or less by means of an adjusting screw.

Claim.—A channelling tool, constructed substantially as described, with the sliding knife or knives *c d*, and adjustable spring knife *e*, operating substantially in the manner set forth.

Also, constructing the knife *e*, with a segmental spring shank, in combination with the adjusting screw *s*, substantially as and for the purposes set forth.

No. 34,422.—J. D. GREENE, of U. S. Army.—*Improvement in Breech-loading Fire-arms.*—Patent dated February 18, 1862.—The plunger or breech plug slides in a chamber formed in the barrel to the rear of the bore. A rod or piston slides freely in the plunger, and has attached to its rear end a hand lever, which passes through and moves in a slot in the plunger, which latter is made to revolve by the lever, the object being a more convenient operation of the parts.

Claim.—The combination of the sliding and revolving plunger or breech plug I with the rod K, when the hand lever L, by which the breech plug is revolved, is attached to the rod, as set forth.

No. 34,423.—J. J. HIRSCHBUHL, of Louisville, Ky.—*Improvement in Military Ammunition Box.*—Patent dated February 18, 1862.—The separate compartments are arranged within an outer case for carrying the different articles of ammunition by themselves, so as to be readily accessible for use.

Claim.—The described ammunition box, having an apartment E for a powder flask, and separate boxes B C D attached to one side by hinges, so as to open outward, for the reception of balls, percussion caps, and cartridges, when arranged in the manner and for the purpose described.

No. 34,424.—WILLIAM HODGSON, Jr., of Philadelphia, Pa.—*Improvement in the Manufacture of Graduated Glass Measures.*—Patent dated February 18, 1862.—On the inside of the mould are cut a series of lines and figures, corresponding with the desired graduations and marks on a glass measure. The mould being properly prepared, the molten glass is poured in, and the conical end of a plug is forced through an opening into the molten glass, thereby compressing the latter into the graduated cuts.

Claim.—The forming of graduated glass measures and the graduations thereon, at one operation, in a press mould, so constructed, marked, and shaped that all vessels made in the same mould will be precisely alike as regards form and capacity, and will have graduations so arranged in respect to that form and capacity that the same accurate measurement may be made of all vessels alike, as set forth.

No. 34,425.—M. W. HOUSE, of Cleveland, Ohio.—*Improvement in Electric Baths.*—Patent dated February 18, 1862.—A net-work basket made of some non-conducting material, and resting upon an insulated support, is placed in the tub. On this basket the patient rests. Two rods extending along the length of the tub are made to revolve around the basket, and an insulated non-conducted tube traverses each. The wires conducting the electricity pass through holes in these tubes, and thus, in connexion with the revolution of rods, can be conducted to any part of the patient.

Claim.—First, the insulator J, for the support of the basket *b*, for the purpose described, in combination with the insulated rotating rods *f* and traversing poles *e*, when arranged and operating as and for the purpose specified.

Second, the head plate C, when hinged to the insulator J, in such a manner that the distance between the plate and head of the patient can be increased or diminished, for the purpose of concentrating or diffusing the electrical current through the part exposed to its action.

No. 34,426.—G. W. HOWARD, of Pontiac, Mich.—*Improvement in Oil Tanks.*—Patent dated February 18, 1862.—The box being placed upon the water, the oil is poured in at the top, thus displacing the water in the box, the specific gravity of the oil allowing it to rise above the water, and remaining in that position. Buoys or floats are secured to the sides of the box to keep it in a level position.

Claim.—Constructing an oil tank with an open bottom, in combination with buoys or floats, substantially in the manner described, whereby the upper edge of the tank is always kept above the surface of the water, and the tank may readily be floated from place to place, or rise and fall with the tide, as described.

No. 34,427.—EDGAR HUSON, of Ithaca, N. Y.—*Improved Method of Raising Carriages.*—Patent dated February 18, 1862.—The slide is raised by the lever, which actuates the loop catching in the ratchet teeth. When the lever is pressed against the standard, the loop holds the slide in the desired position.

Claim.—Such a combination of lever loop joints and ratchets for a carriage jack as that, when the weight is raised and the lever pressed down against the standard, the slide is supported and upheld without any fastening by the support of the loop, which falls outside the joint D.

No. 34,428.—T. A. JENCKES, of Providence, R. I.—*Improved Water-Proof Fabric.*—Patent dated February 18, 1862.—Cloth or other textile fabric, upon which is fed prepared India-rubber or gum, is made to pass between metallic rollers, thus thoroughly incorporating the rubber with the fabric. Upon the gummed surface of the fabric is then sifted or spread a coating of flocks of wool, fur, silk, or other fibrous substance, in such a manner that each fibre shall fall as nearly as possible by itself. The whole is then subjected to another powerful pressure, so that the parts combine and form integral portions of the compound fabric.

Claim.—The fabric in which flocks or fibres and India-rubber or other allied gums are combined with cloth or other base by means of pressure, so as to become integral portions of the new napped water-proof fabric, substantially as described, the same being a new manufacture.

No. 34,429.—G. R. KELSEY, of West Haven, Conn.—*Improvement in the Manufacture of Buckles.*—Patent dated February 18, 1862.—The bow and loop are made of one piece of wire, swaged into proper shape. The ends of the cross-piece are flattened so as to be readily turned upon the sides of the frame. The tongue is also flattened at its inner end and turned on the cross-piece.

Claim.—A buckle in which the bow and loop are made of one piece of wire, when the ends of the cross-bar *c* are clinched around the opposite parts, *a* and *b*, of the bow and loops, to strengthen the buckles, as described.

No. 34,430.—RHODOLPHUS KINSLEY, of Springfield, Mass.—*Improvement in Tompion for Fire-arms.*—Patent dated February 18, 1862.—For closing the muzzle of a fire-arm when not in use. The surface of the shank is made concave, so as to give less bearing on the inner surface of the gun, in case of expansion from moisture, and also to facilitate the springing of the

legs. A concavity is formed in the inner side of each leg, in which a spring is securely fastened, thus distending the legs and securely retaining the tompion.

Claim.—First, a tompion consisting of a wooden pin split in two parts throughout a portion of its length, and having a spring of metal, rubber, or other suitable substance inserted between these two parts to force them against the bore of a gun, substantially in the manner and for the purpose described.

Second, forming the pin or shank part of the tompion smaller at the middle than at each end, for the purpose and in the manner substantially as set forth.

No. 34,431.—A. KLINE, of Philadelphia, Pa.—*Improved Match-safe.*—Patent dated February 18, 1862.—The lid is designed to be kept closed, when not in use, by means of a spring connected with a bent arm on the inner side of the lid. A pressure of the hand easily opens the lid when a match is to be taken out.

Claim.—The match-safe A having its lid B applied and arranged to operate in relation to the same in the modes described and set forth for the purpose specified.

No. 34,432.—I. W. KNAPP, of New York, N. Y.—*Improvement in Bakers' Ovens.*—Patent dated February 18, 1862.—This improvement is designed to be adapted to the mechanical bake oven for which a patent was granted to H. Ball, September 23, 1856. A flue connects the chimney with a fire-chamber below the oven, and the damper being operated by a chain, is so arranged as to shut off the products of combustion from the ovens when desirable.

Claim.—Combination with the fire-chamber of the mechanical bake oven known as the "reel oven," a flue or passage way, provided with a suitable damper, leading from the fire-chamber to the chimney, and so arranged with relation to the perforated baking-chamber containing the reel and bread-pans as to conduct smoke, gases, &c., (heretofore allowed to pass into the baking-chamber,) directly from the fire-chamber to the chimney, substantially as described.

No. 34,433.—T. S. LAMBERT, of Peekskill, N. Y.—*Improvement in Camp Stoves.*—Patent dated February 18, 1862.—The cylinders are made in sections, so that one can slide into the other when the bolts are removed. A tube on one side is connected with an opening in the lower section to admit of a draught. On the opposite side is a tube which furnishes air to the chamber around the cylinder for heating and a flue to conduct off the smoke.

Claim.—The combination of the sectional cylinders with the draught pipes or flues C D H, constructed as described, and with the smoke-flues and cover, substantially as set forth.

No. 34,434.—R. S. LAWRENCE, of Hartford, Conn.—*Improvement in Forging Apparatus.*—Patent dated February 18, 1862.—This invention consists in attaching a small belt and weight to the main drum or to the large belt, so that the latter shall be unwound and allowed to hang loose after it has performed its duty on the drum. Both belts are wound up together, and when the drum is thrown out of gear the belts are immediately unwound by means of the small weight, leaving the main belt hanging free.

Claim.—An auxiliary weight and belt combined with the pulley or drum of a drop, or with the belt or strap, or other appliance, used to raise the drop-weight for the purpose set forth.

No. 34,435.—JOHN LE FERRE, of Charlestown, Mass.—*Improved Metal for Sheathing Ships.*—Patent dated February 18, 1862.—The invention is designed to prevent corrosion of the sheathing, caused by the action of salt water upon plain copper.

Claim.—A sheet of copper or of copper alloy, coated with tin, substantially as set forth.

No. 34,436.—JACOB LONGYEAR, of Grass Lake, Mich.—*Improved Boring Machine.*—Patent dated February 18, 1862.—Two parallel bars are placed, one at each side of the frame, on screws passing through the side rails of the frame, and are secured in proper position by jaw-nuts; a carriage is placed upon a guide secured to each bar, and allowed to slide freely back and forth; a bar or adjustable stop is secured to the carriage at right angles with the side pieces, and serves as a gauge or bearing for the stile; the carriage is moved forward towards the bits; the object being to bore a number of holes at one operation, as required in blind stiles to receive the tenons of the slats.

Claim.—The arrangement of the independently-adjustable carriage bars I I, with the carriage L, adjustable stop M, and the series of boring bits H H H, all as shown and described.

No. 34,437.—HENRY LYON, of Brooklyn, N. Y.—*Improved Cork Sole for Boots and Shoes.*—Patent dated February 18, 1862.—Cork being ground or cut into small pieces, is mixed with gum-elastic dissolved in oil of turpentine or otherwise; this composition is spread upon cloth having a facing of soft gum-elastic; the sole being cut from the cloth is placed inside the boot or shoe, to which it firmly adheres.

Claim.—The improved water-proof cork sole made from fine or granulated cork, as set forth in this specification.

No. 34,438.—M. M. MACKERLEY, of South Salem, Ohio.—*Improved Corn Planter and Lime Spreader Combined.*—Patent dated February 18, 1862.—A seed dropper arranged in the bottom of the seed box has a reciprocating motion imparted to it by an eccentric connected with the shaft; the dropper has two receivers moving alternately over the delivery hole for dropping two hills; a manure box is secured to a frame at the rear of the main frame and connected with a valve box, the valves being operated by means of pins on the wheel striking against a dog hinged to the bottom of the box; the dropper works between two mould boards of the share. The machine being in operation, the seeds are dropped in the furrow made by the plough, and covered with fine manure from the box.

Claim.—The box F, the plough N, the valve D, the box H, the eccentric Q, the connecting-rod *e*, pins *e e*, valves I, box J, and dog *f*, the whole to be constructed and arranged with respect to each other, substantially in the manner described for the purpose specified.

No. 34,439.—ALMERON MCKENNEY, of Maumee, Ohio.—*Improvement in Grubbing Machines.*—Patent dated February 18, 1862.—The hollow axle has two flanges cast upon it, to which the levers are bolted; it also has projections for the clevis to catch into when the machine is in operation. The wheels are formed of boards bolted together with the grain of the wood crossed. The lever is bolted to the axle. A metal ratchet wheel is secured to the inner surface of the wheels; secured to the lever are two ratchet hooks turning readily upon bolts, so as to catch into the teeth of the ratchet wheels. On the upper edge of the lever, near its but, is a metallic plate, to which is secured a jaw by a bolt passing through the lever; a slot in the jaw admits of longitudinal adjustment upon the lever; a clevis, provided with hooks at its ends, catches upon the projections in the axle; in the bow of the clevis are formed teeth for the purpose of taking firm hold of the root or grub. The hooks are prevented from catching into the teeth of the wheels, when desirable, by means of a small rod having a cam at each end, which rod passes through the lever, and is operated by a handle.

Claim.—First, the employment of the hollow axle A, constructed as specified, and provided with the flanges *a a* and projections *b b*, as and for the purpose specified.

Second, the employment of the wheels B B and the hollow lever C, as constructed and used in connexion with the hollow axle A, for the purpose specified.

Third, the combination of the ratchet hooks G G, the ratchet wheels E E, the lever C the bars J J, and counter balance K, constructed and arranged as specified.

Fourth, the metallic jaw *c*, provided with flanges, and a slot for longitudinal adjustment, when bolted to the lever as and for the purpose specified.

Fifth, the employment of the clevis, constructed in the manner described and used with the axle provided with lugs, as and for the purpose specified.

Sixth, the employment of the bolt *i*, with eccentrics and handle in connexion with the levers and ratchet hooks, to prevent the wheels from becoming locked too soon, substantially as specified.

No. 34,440.—D. L. MILLER, of Madison, N. J.—*Improved Elevating Machine.*—Patent dated February 18, 1862.—This machine is designed to be used in clearing new-made land of stones and stumps. The windlass is so arranged as to cause the strain in lifting to be equally divided upon the wheels. The windlass is operated by a worm screw and worm wheel, whereby a continuous motion is given to the windlass. One of the boxes in which the worm screw is journalled is pivoted so that the opposite end of the screw can be raised and disengaged from the worm wheel, for the purpose of allowing the windlass to be operated with greater speed, when it is desired to unwind or wind up the chain preparatory to elevating the stump or stone.

Claim.—The worm screw K, and manner of arranging the boxes *f g* of the same, so that it can be easily disengaged from the worm wheel J, in combination therewith, and with the windlass L, draught chain *i*, box frame I, inclined stud G, and brace H, platform A, and longitudinal beams *a a' b b'*, the whole mounted upon wheels and arranged in the manner and for the purpose set forth.

No. 34,441.—JOSEPH MILLER, of Paris, Ohio.—*Improvement in Horse-Rakes.*—Patent dated February 18, 1862.—Protuberances are formed upon the head, so as to give the strap a greater purchase. The straps are supported by rollers journalled upon the standard. A spur attached beneath the strap by catching over the roller, when the strap is drawn forward, retains the rake at its working position. The treadles are hinged to the standards, and, in connexion with straps, operate the rake-head. The seat is supported upon standards attached to the axle-tree.

Claim.—First, the arrangement of the protuberances K K', straps or chains *i j*, rollers M, spur N, and stops L, in connexion with the foot-levers I J, to facilitate the elevation, depression, and holding down of the rake, as explained.

Second, the combination of the standard G, seat H, and vertical foot-lever I J, the levers being mounted upon the standard G, the latter secured to the axle A, and all arranged in the manner and for the purpose shown and explained.

No. 34,442.—C. R. MOREHOUSE, of Cardington, Ohio.—*Improvement in Rat-Traps.*—Patent dated February 18, 1862.—A crank rod is attached to bars by staples, against which rod a spring presses, so as to turn it. Over the crank of the rod is a hinged plate, upon which the end of a trigger catches, for holding it down. Two hinged doors are placed on the top of the box, provided with notched bars for catching into the rod. The doors are made to close by means of coiled springs upon cross-bars, when the hinged plate is loosened by the movements of the rat.

Claim.—First, the arrangement of the rod G, spring *d d*, plate I, and trigger J, as and for the purpose specified.

Second, the arrangement of the doors C C, the bars H H, and the rod G, in the manner and for the purpose specified.

No. 33,343.—JOHN NORTON, of Rosherville, England.—*Improvement in Mode of Splitting Stumps of Trees, Timber, &c.*—Patent dated February 18, 1862.—The lower or stiff portion of a paper cartridge is filled with percussion powder. The upper or thinner part of the case is then tied close above the stiff part. A hole being bored in the stump to be split, the cartridge is inserted and exploded by a blow imparted in any convenient way.

Claim.—The general system or mode of splitting stumps of trees or large blocks of timber by the use of cartridges of percussion powder, as described.

No. 34,444.—JAMES OLD, of Pittsburg, Pa.—*Improvement in Pumps for Deep Wells.*—Patent dated February 18, 1862.—The object of this invention is to obviate the difficulty caused by gas from the bottom of the well passing through the pump and interfering with its action. In the coupling at the top of the hollow piston rod is a cavity in which a light valve works, which closes the top of the pipe forming the piston rod. Through one side of this coupling is an orifice, to which is attached a flexible tube or hose, by means of which the inflammable gas which escapes from the well is conducted away, so as to prevent accidental explosions. Above the check-valve, and at a suitable distance to avoid contact with it, is an air vessel which consists of a hollow metallic cylinder, closed at the top and open at the bottom. This vessel surrounds the piston rod and leaves sufficient space for the oil or water to pass between it and the sides of the tubing, and is designed to contain air enough to operate, by its elastic force, on the columns of the liquid in the well-tube, so as to keep up the upward flow of oil or water on the descent of the plunger of the pump.

Claim.—The use of a hollow piston rod or pipe, extending through the lowest valve, as well as through the upper valve or plunger of pumps, and furnished with a valve at top of the hollow piston rod or gas pipe, constructed and arranged substantially as described, for the purpose of allowing of the escape of gas or fixed air from the bottom of deep wells without interfering with the operations of the valves of the pump.

Also, the combination of a hollow piston rod for the plunger of a pump passing through all the valves of the pump cylinder, with a flexible tube and valve at the top of the hollow piston rod, constructed substantially as and for the purpose described.

Also, the use of a check-valve, seated in the pump chamber directly above and in addition to the ordinary upper and lower pump valves, for the purpose of sustaining and relieving the plunger of the pressure of the column of oil, or other liquid, in the pump tube above the valves, when there is a partial vacuum in the pump chamber on the up-stroke of the plunger.

Also, the use of an air vessel attached to a piston rod of a pump, for the purpose of checking the too rapid descent of the plunger and of keeping up the upward flow of the column of water, oil, or other liquid, in the pump tube above the valves during the descent of the plunger, substantially as described.

No. 34,445.—C. H. PACKHARD, of North Bridgewater, Mass.—*Improved Clothes-wringer.*—Patent dated February 18, 1862.—Between the legs of the main frame and the larger arms of the rocker levers, and attached to their lower parts, are two V-shaped springs, so arranged that should a mass of clothes, passing between the rollers, be very thick near one end, and there be little or no thickness between the other ends, the upper roller will adjust itself so that all the mass of clothes will be acted upon.

Claim.—In a wringing machine whose upper elastic roller is supported in a rocker frame, the arrangement of the springs K K, between the feet B B and the arms *c c'*, in combination with so constructing and applying the rocker frame that its upper end or arms *f f'* may both be elevated at the same time, or either of them, as may be desirable, whereby the said springs and rollers are caused to operate, substantially in the manner as set forth.

No. 34,446.—OSCAR PADDOCK, of Watertown, N. Y.—*Improvement in Operating Dampers in Stoves.*—Patent dated February 18, 1862.—Valves are pivoted in the vertical pipes, one near the lower end of the front pipe, the other intermediately between the branch pipes in the rear vertical pipe. They are operated so as to open and close, by jointed arms and rods leading to the front of the stove. When closed, the valves shut off communication between the vertical pipes and chimney, and when opened, a strong draught is created.

Claim.—In combination with a stove, when the same is provided with two upright pipes C C', communicating with and sustaining horizontal flues arranged in relation to each other, substantially as described, the arrangement of the valves J J', operating within the said pipes, so as to open and close simultaneously by means of connecting rods, or their equivalents, for the purposes set forth.

No. 34,447.—W. H. PIERCE, of East Cambridge, Mass.—*Improvement in Guards for Lanterns.*—Patent dated February 18, 1862.—The upper and lower rims are made in two parts, one end lapping on the other. A series of curved wires extend from the upper to the lower rim, each being curved inwardly at their centre. A ring or band is forced down over the wires and fits in the central depressions of the connecting wires, thus holding them firmly together.

Claim.—The band or ring C, as constructed and applied to the ribs *c*, and made to operate therewith, substantially in the manner and for the purpose set forth.

No. 34,448.—J. S. RANKIN, of Madison, Ind.—*Improved School Desk.*—Patent dated February 18, 1862.—The desks being framed into a continuous joist, require a less number of legs to support them, thus giving more room and admitting of freer access, and are less easily moved from their position.

Claim.—Building the framework of a series of school desks on a continuous central wooden joist or beam I, running fore and aft, the desks and joists being mutually framed into each other, substantially as set forth.

No. 34,449.—B. F. SKINNER and A. PLUMMER, Jr., of Mystic Bridge, Conn.—*Improvement in Breech-Loading Fire-arms.*—Patent dated February 18, 1862.—The breech is of the form of a prism, fitted to fill snugly a recess in the frame, and it is arranged to swing between centres near the right side of the frame and near the bottom of the recess, the axis of said centres being slightly oblique to the axis of the barrel, which causes the front face of the breech to move in a slightly rearward direction relatively to the barrel in the act of opening, and in a forward direction when closing. The device for exploding the priming consists of a needle attached to a sliding bolt, behind which there is placed within the breech a coiled mainspring. From the bottom of the bolt a tooth projects, which works in a slot in the bottom of the breech, and, in connexion with a lower slide and pin operated by a trigger, is made to cock and discharge. The breech may be set up to compensate for wear by screwing up the back centre screw, which also serves to adjust the face of the breech to the front of the recess and rear end of the barrel.

Claim.—First, the arrangement of the eccentric axis of the swinging breech, in a position oblique to the axis of the bore or barrel, substantially as and for the purpose specified.

Second, the combination of the needle bolt or hammer F, with its spring G, enclosed in the swinging breech B, with the slide J, and trigger *h* and I, in the frame A, or their equivalents, operating substantially as described.

Third, the employment, for setting up the breech, of a screw D, which also serves as one of two centres on which the breech swings, to open and close, substantially as and for the purpose specified.

No. 34,450.—R. N. STEWART, of Philadelphia, Pa.—*Improvement in Gas Burners.*—Patent dated February 18, 1862.—An arched warming plate, consisting of a piece of metal, is made to fit closely over the convex end and down along each side of a burner. To this plate is hinged a cap on one side of the burner, and in the recess of the cap is secured a thin piece of metal, in such a manner that as the cap covers the burner the plate shall pass into the cut in the burner to its full extent, for the purpose of keeping the burner clean and free from dust.

Claim.—In combination with the plate B, arranged as described, the hinged cap C and clearing plate D, constructed, combined, and arranged to operate substantially in the manner described and for the purpose specified.

No. 34,451.—A. STOCKWELL and B. D. HUMES, of Millbury, Mass.—*Improvement in Looms.*—Patent dated February 18, 1862.—One end of the slide bar is connected by a link to one arm of a right angular lever whose fulcrum is situated near to the yarn beam, and so that the arm of said lever may rest against the periphery of the yarn on the beam, it being pressed against the same by a spring applied to the lever and its fulcrum. A tension arm is pressed by a spring against the adjacent end of the slide-bar. The end of the yarn beam is provided with a worm gear on which a worm engages. Under and against the worm is a forked lever which spans the upright shaft and operates in conjunction with a tri-armed lever, one arm of which rests on an arm of the forked lever, while another extends over and upon a pin projected from a sword of the lay; the third arm enters a slot in the slide bar. A lever pawl or dog is placed over a rack of teeth in the slide bar, and held up by a rod jointed to it and a pawl lever, which operates to stop the let-off at once.

Claim.—First, the lever N, forced by a spring against the yarn on the beam, and connected with the slide-bar L, by a link M.

Second, the tension arm O, operated substantially as set forth.

Third, the slide-bar L, the rocker lever E, with its pawl and ratchet mechanism, the shaft D, the levers K J, the movable worm C, and its gear as applied to the yarn beam.

Fourth, also the combination of the pawl U, and its rack, with the yarn-delivering and taking-up mechanisms, constructed in manner and so as to operate substantially as specified.

No. 34,452.—L. B. TYNG, of Lowell, Mass.—*Improvement in Railroad Joints or Chairs.*—Patent dated February 18, 1862.—The coupling is first formed in two parts, horizontally, which are then welded together. The upright portions form the jaws of the coupling, and are designed to be about double the thickness of the horizontal connexions. Under the lower part is formed a rib for strengthening the coupling, the object being to secure a smooth and easy motion of the cars over the ends of the rails.

Claim.—A rail coupling constructed and consisting of a single piece, embracing the combination of features substantially as set forth, and its combination with railroad rails; that is to say, a stiffening rib *o*, formed and constructed longitudinally in or upon the base of a rail coupling, composed of a single piece, having a spring bow to clasp the rail base, and jaws to clamp the rail stem and rivet or bolt thereto. It is not intended by this to limit the invention and claim to the particular form and construction of rib represented in the drawing, but to such form or forms and construction of rib as may be most convenient and will produce the same effect. Also, the combination of the rigid jaws, with a spring bow in the aforesaid rail coupling, substantially as set forth.

No. 34,453.—O. C. WASHBURN, of Philadelphia, Pa.—*Improved Composition for Making Oil-Cloth.*—Patent dated February 18, 1862.—The ingredients forming the coating paste are oil sweetmeats, boiled oil, white vitriol, carbonate of ammonia, lamp-black, oil, light daub, and water. The paste is laid on in several coats, varying in the proportion of the ingredients.

Claim.—The new mode of making coating paste for the manufacture of oil-cloths, in all their varieties, by a combination of carbonate of ammonia, white vitriol, boiled oil, and water, substantially as set forth.

No. 34,454.—WILLIAM WEITLING, of New York, N. Y.—*Improved Stitch for Button-holes.*—Patent dated February 18, 1862.—The stitch work is composed of three threads, one of which is stitched through the cloth by the sewing machine needle, and another is carried through the opening of the button-hole by the thread-carrier. These threads, in rising again, form loops under the plate, through which loops the shuttle passes the third thread, thus checking both loops on the lower side of the button-hole or edge.

Claim.—A stitchwork for edging and button-holes, this stitchwork being a combination of three threads, by which combination the one thread, when passing through the cloth loop, checks the other when passing round the edge of the cloth, and both of these being loop-checked on the other side of the cloth by the thread of the shuttle, or its equivalent, as set forth.

No. 34,455.—J. W. WILCOX, of West Roxbury, Mass.—*Improved Mode of Preventing Corrosion of Steam Boilers, Vats, Tanks, &c.*—Patent dated February 18, 1862.—Between the iron boiler, tank, or vat and other metals negative to iron and communicating with it, are placed insulating joints fitted with any non-conducting substance, such as rubber packing. The water, before entering such boiler or tank, is caused to pass through a vessel containing zinc or its equivalent in galvanic properties, in such a manner as to be brought in contact with the zinc, so as to be freed from all the copper and other metals negative to iron, held by it in solution in the form of salts, which are an active agent in the destruction of boilers and other iron vessels.

Claim.—First, so purifying the water as it passes from the condenser to the boiler of the steam engine as to free it from all metallic salt destructive to iron, in the manner substantially as described.

Second, the rupture or breaking of any galvanic or electric current that would otherwise exist between the steam boiler and all other connecting steam or water fixtures that may be composed of metals that are electro-negative to iron, substantially in the manner and for the purposes set forth.

No. 34,456.—HOSEA WILLARD, of Vergennes, Vermont.—*Improved Clothes Bar.*—Patent dated February 18, 1862.—A semicircular bracket is secured against the wall, having stirrups cast upon its lower edge for the reception of bars which are pivoted to the stirrups in such a manner that they may be retained in a horizontal position or turned up against the wall when not required for use.

Claim.—The construction of the bracket A, with a projecting shelf D, and stirrups *a*, substantially as shown and described, in combination with the bars B, whereby the inner ends of the bars B will bear against the shaft D, which will resist the weight placed upon the bars and keep them in a horizontal position, all as set forth.

The arrangement of the bars B, to fold toward and radiate from a common centre, in combination with the bracket A, as shown and described.

No. 34,457.—S. D. WOODBURY, of Lynn, Mass.—*Improvement in Camp Stoves.*—Patent dated February 18, 1862.—The construction of the stove enables it to be readily taken apart and set up and packed in a small compass for transportation.

Claim.—First, forming the fire chamber of two sections of a conical or other tapering form, that enables one section to be placed within the other, substantially in the manner and for the purpose described.

Second, forming a sectional stovepipe of tapering pieces, when said tapering pieces are susceptible of being dismembered from each other and from the stove itself, and the parts held together by the wedging of the pieces themselves when the stovepipe is drawn out or erected, substantially as described.

No. 34,458.—J. W. BROWNE, of New York, N. Y., assignor to J. M. VAN WAGNER, of Summit, N. J.—*Improvement in Weather-Strip Moulding.*—Patent dated February 18, 1862.—Felt, rubber, or other elastic substance, is so secured to a backing or rigid material as to expose both edges of the felt. The felt side is placed against a fixed part, as the jamb of a door or window-frame, and the felt edge against the moving part, as a sash, door, &c., so as to present a yielding capacity to both contiguous surfaces.

Claim.—The new manufacture of improved weather-strip moulding, substantially as described.

No. 34,459.—ELLIOT DICKERMAN, of Middlefield, Conn., assignor to METROPOLITAN WASHING MACHINE COMPANY, of Middletown, Conn.—*Improvement in Clothes-wringing Machine.*—Patent dated February 18, 1862.—To the outside of the main frame are pivoted brackets. The whole being placed over the edge of the tub, wedges are driven in between the upper parts of the brackets and frame, thus firmly clamping the lower parts upon the tub. The object being to avoid defacing the tub by friction of the lower parts, and to give greater security to the frame of the tub.

Claim.—Constructing the frame of a clothes-wringer in two or more parts, connected together in the manner of a vice or tongs, so as to form a movable jaw, operated at a point or points above the tub or vessel and adapted to clamp the machine upon said tub or vessel, substantially in the manner set forth.

No. 34,460.—E. S. BENNETT, assignor to himself, JAMES THOUBBORON, and LYDIA BROWN, of Brooklyn, N. Y.—*Improvement in Locks.*—Patent dated February 18, 1862.—The key is formed in two pieces, united by a universal joint, and provided with a hinged key bit which admits of its being thrust into a bent or curved keyhole, and freely turning, forces back the bolt or latch. The object being to prevent the introduction of picks and false keys, and the inspection of the interior of the lock by the use of reflectors.

Claim.—The bent or angular keyhole, formed substantially as shown, in combination with the divided key shank *e*, connected by the universal joint *f*, for the purpose specified.

No. 34,461.—JOHN DILLINGHAM, assignor to JESSE FOLLET, of Turner, Maine.—*Improved Fender or Sheath for Boots and Shoes.*—Patent dated February 18, 1862.—The sheath is so formed as to cover the upper leather at the toe of the shoe, and extend downwards over the outer sole, passing over on the outside of said sole sufficiently to be fastened by nails. It has also a central flange extending back a short distance, between the outer and inner sole.

Claim.—First, the connexion or union of the covering, for the upper leather and sole of the toe of the boot or shoe, in one entire piece of metal or other substance, as novel, and therefore an improvement.

Second, also as novel, the peculiar form of the sheath, whereby the covering for the upper and under leather of the shoe or boot is connected by a central flange to support it; therefore not liable to get out of place.

No. 34,462.—H. P. GENGEMBRE, of Tarentum, Pa., assignor to G. W. HOWARD, of Pontiac, Mich.—*Improved Method of Storing Oils.*—Patent dated February 18, 1862.—The oils are stored in a tank or vessel having tight sides, but open at the bottom, and placed in a reservoir or cistern of water, so that as the oil flows into the tank it will displace the water, which will escape from the bottom of the tank. The oil is conveyed into the tank through a pipe in the cover.

Claim.—The method described of storing oils, in order to prevent leakage from hydrostatic pressure.

Also, storing oils in tanks constructed with tight sides, but open at bottom and immersed in water, in order to relieve the sides thereof from hydrostatic pressure, substantially in the manner described.

No. 34,463.—E. J. HALL, of Highgate, assignor to himself and C. P. STIMETS, of Vermont.—*Improved Spring Caster.*—Patent dated February 18, 1862.—The upper ends of the springs are attached to a plate which rests on a shoulder on the arbor so as to turn freely on the same. The lower ends are attached to a plate which is permanently secured to the bottom of the leg of the piece of furniture, the object being to combine the advantage of the springs with the free turning of the caster.

Claim.—The combination of a roller caster with a spiral spring or springs C, when the latter are suspended to a plate *b*, resting or bearing loosely on a shoulder or bearing *a* on the arbor B, to admit of the free rotation of the arbor without affecting the tension of the springs, as set forth.

No. 34,464.—T. S. LAMBERT, assignor to J. S. WRIGHT, of Peekskill, N. Y.—*Improvement in the Mode of Constructing Garments.*—Patent dated February 18, 1862.—A pair of pantaloons and vest are connected together and provided with elastic bands at the waist and neck, to hold the garment in place without the use of buttons or buckles.

Claim.—First, the application of the elastic band to retain the garment in its proper position at the waist, in the manner set forth.

Second, the application of the elastic band to retain the garment in the proper position at the neck, in the manner set forth.

Third, the making the garment of such proportions at the waist and neck as are set forth.

Fourth, the application of the elastic cords in front in combination with the fly, as set forth.

Fifth, the combination of the elastic bands at the neck and waist, and the combination of the elastic bands at the neck, waist, and bottom of the garment, as set forth.

No. 34,465.—CHARLES KIRK, assignor to CHARLES MONSON and STILLMAN MOORE, of New Haven, Conn.—*Improvement in Dry Gas-Meters.*—Patent dated February 18, 1862.—The double or measuring bellows are so constructed and arranged in connexion with the valves that the outer surfaces of the two rings of the bellows, when alternately filled, will work the valves of the gas ports, so that the induction valve for one apartment of the bellows and the eduction valve of the other will be simultaneously opened, while the other valves will be closed; so that when the required quantity of gas shall have passed into one apartment of the bellows it will be so far expanded that the outer surface working on the extremity of one arm of a bell crank will close the two valves which have been opened and open the opposite two, the two wings of the bellows being connected together by an inflexible cross-bar; one apartment must discharge as the other fills. The same expansion of the bellows will work the index that registers the quantity of gas measured. The valves are opened and closed by a rod, which is rocked by a vertical-weighted bar secured to the rod, and worked by two helical springs. An additional bellows, which receives the measured gas, is used to obviate any bad effects of increased pressure in the main.

Claim.—First, so constructing and operating a dry gas-meter that the alternate expansion of the two apartments of the double bellows, while it measures the gas, will regulate the opening and closing of the valves, which admit the gas alternately into the apartments to be measured and, after being measured, allow it to pass out for use, when the whole is constructed, arranged, and fitted for use, substantially as described.

Second, the method of opening and closing the two pairs of valves by means of the valve rod *i* and the helical springs *l* and *m*, when they are arranged, connected, and fitted to produce the result, substantially as described.

Third, the described method of registering the quantity of gas thus measured by the alternate expansion of the two apartments of the double bellows by means of the slide and dog, or hand, substantially as described.

Fourth, the use of the additional bellows N to counteract the varying pressure in the main, when fitted to close its induction valve by its own expansion, and to allow it to be opened by its own contraction, substantially as described.

No. 34,466.—THOMAS NEWCOMB, of Kingston, Mass., and C. C. NEWCOMB, of Warren, Me., assignor to THOMAS NEWCOMB, of Kingston, Mass.—*Improved Stump and Rock Extractor and Elevator.*—Patent dated February 18, 1862.—This machine is designed as an improvement on the patent of C. Bates, April 17, 1860. Two detaching springs, provided with hooks, are suspended from the brake-head at or near its outer extremities, and when in use the said hooks are to be hooked into eyes or staples projecting from the cross-bars, so that while being lifted, each spring draws the next adjacent pawl lever away and out of engagement with the ratchet. A hanger or arm extends from each end of the shaft nearly down to the level of the bottom of the ratchet wheel, and serves to support one end of the chain when a pulley is employed in connexion with the sprocket wheel. The arms keep the chain free from the wheels. A suspension hanger is arranged directly over the middle of the sprocket-wheel so that the hanger, the sprocket-wheel, and the centre of gravity of the weight to be lifted, may be in a vertical line.

Claim.—The described improved arrangement of the detaching springs or devices K K, with respect to the pall bars G′ H′, and the brake I.

Also, the combination of the pulley hangers N N with the sprocket-wheel D, the supporting frame B, and the mechanism for operating the sprocket-wheel.

Also, the arrangement of the hanger or staple *a*, with respect to the sprocket-wheel and its rotating machinery.

No. 34,467.—HENRY NEWHOUSE, assignor to N. S. BOUTON, of Chicago, Ill.—*Improvement in Machine for Cutting Twist Mouldings.*—Patent dated February 18, 1862.—The knife-changing ring or wheel has two grooves on either side: a knife holder is attached to the back of the ring by clamps, but at the same time revolving independently of it. Knife-shifters, connected with the knives, work in grooves in the face and back of the knife-changing ring. A knife-directing cylinder is provided with a groove or grooves cut spirally around it for the knife guide to move in. When the lathe has nearly completed a revolution, the knife-shifters are carried to that portion of the wheel where both grooves, uniting in one, are separated by a switch which is kept in place by a spring under it, allowing the shifters to pass through the switch out of the groove in which they were moving, and immediately closing, thereby preventing their return into the same groove. The shifters are placed, one in the outer groove, and the other upon the opposite side in the inner groove, thus alternately changing the position of the knives.

Claim.—First, the grooved wheel A, with the switches, or their equivalents, substantially as described.

Second, the knife-holder B, constructed and operated substantially as described.

Third, the knife-shifters *b b*, in combination with the knife-holder, used in the manner and for the purpose specified.

Fourth, the combination of the cylinder C with the spiral grooves thereon, or their equivalents, for directing the knife, substantially as and for the purpose specified.

Fifth, the knife-guide ring D, with its guide *d*, in combination with the spiral grooves of cylinder C, as specified.

Sixth, the combination of the knife-holder and its adjusting mechanism with the wheel E, and the knife-guiding mechanism, operating automatically as and for the purpose specified.

No. 34,468.—ADAM OOT, assignor to Himself and M. S. CLARK, of Minetto, N. Y.—*Improvement in Camp Stoves.*—Patent dated February 18, 1862.—The front, rear, and side plates are provided with flat staples which pass through slots in the upper and lower plates, where they are secured by keys. Rods attached by staples to the side plates are placed across to support the top plate.

Claim.—Making a portable stove in separate plates or sheets, attached together by staples and keys, so as to be readily taken apart and put together, substantially in the manner and for the purpose described.

No. 34,469.—W. E. PRALL, assignor to Himself, HARRY EASTMAN, and W. A. WITHAM, of Maineville, Ohio.—*Improved Evaporating Pans for Saccharine Juices.*—Patent dated February 18, 1862.—The partitions separating the compartments are provided with apertures alternately at the lower part of their end and middle portions, to permit the passage of the lowest stratum of sap, while compelling it to flow in a meandering course. The liquor is conducted alternately through gate-guarded ducts into the side defecators, and when all its impurities have been precipitated, is decanted successively through gate-guarded ducts into the second or boiling pan, placed a little lower than the defecators. Having two settling pans, admits of one being decanted, cleansed, and refilled, while the other is settling. Fenders are used to protect from too intense heat the sides of the reservoir and teach or boiler nearest the fire.

Claim.—First, a series of evaporating pans, descending from the front of the furnace to the chimney, as shown and described.

Second, in the described combination with a descending series of evaporating pans, the arrangement of side defecators F F′, isolated from the fire, and communicating with the first and second evaporating pans, in the manner and for the objects stated.

Third, the fenders O, when used in the described connexion, with a series of evaporating pans, descending from the front toward the chimney.

No. 34,470.—J. E. WALCOTT, assignor to W. H. BLACKLER, of Boston, Mass.—*Improvement in Process of Electro-plating Iron and other Metals with Copper.*—Patent dated February 18, 1862.—The invention consists in the employment of a solution of fused cyanide of potassa of great strength, in connexion with a powerful galvanic current, without the use of either sulphate or cyanide of copper, by which means the operation is reduced in cost and divested of deleterious effect upon the workmen.

Claim.—The process of electro-plating with copper, substantially as described.

No. 34,471.—N. W. WHEELER, of Brooklyn, N. Y., assignor to SIMON STEVENS, of Lancaster, Pa.—*Improvement in Tractor Motive Engines.*—Patent dated February 18, 1862.—The driving wheels are firmly attached to the main driving axle, their peripheries being bevelled to correspond to the surfaces of the rails within the drum. The guide wheels are mounted upon the frames at a height equal or nearly so to the centre of the drum, and serve to hold the drum in its proper position whilst running. The water tank is placed in and nearly fills the interior space of the drum. It is supported upon the frame by brackets, and running through it longitudinally are three tubes for the passage of the shafts of the guide wheels and the main driving shaft.

Claim.—First, the combination of the traction drum A, driving wheels B B, and guide wheels C C C C, substantially as and for the purposes described.

Second, supporting the feed-water tank E within the drum A and upon the frame D D, by means of the brackets R R, the whole being arranged substantially as described.

No. 34,472.—B. T. RABBITT, of New York, N. Y.—*Improvement in the Construction of Ordnance.*—Patent dated February 25, 1862.—The object of this invention is to provide for a circulation of water or air through the walls of the cannon, for the purpose of keeping the piece cool when in use, and cooling the casting in the manufacture of the piece.

Claim.—The construction of a piece of ordnance with a passage *a* winding spirally round the bore, and within the walls thereof, substantially as and for the purpose specified.

No. 34,473.—N. BADGER, of Shelbyville, Ky.—*Improved Digging Machine.*—Patent dated February 25, 1862.—The teeth or spades are secured to arms which are attached to the axis or shaft, the latter being bent to form a crank at each end. The arms pass through oscillating guides journalled in the periphery of the cylinder. The cylinder being rotated, the teeth are forced out from the cylinder through the guides by the eccentric construction of the main shaft, as they pass under it, and are drawn inward as they ascend, at the front of the cylinder, causing them to penetrate the earth, which is discharged at the back of the cylinder, and thrown between the pulverizing rollers in the rear.

Claim.—The combination of the oscillating guide I, arms *d*, and crank G, with the cylinder F, as and for the purpose shown and described.

Also, the combination with the parts of the pulverizing rollers N P, as shown and described.

No. 34,474.—LOUIS BAIL, of New Haven, Conn.—*Improvement in Construction of Foundations for Light-houses, Piers, &c.*—Patent dated February 25, 1862.—The object of this invention is to obtain a material previously prepared and which may be conveniently transported and expeditiously put together to form the foundation or structure suitable for sandy bottoms.

Claim.—Constructing the foundations and other portions of light-houses, coffer-dams, and other similar structures, of cast-iron segment plates A, provided at the inner or concave side with flanches *a a'*, to receive screw bolts *c*, for the purpose of securing the plates together to form a cylinder, and then filling the cylinder with concrete, stone, or other suitable material, substantially as set forth.

No. 34,475.—J. L. BEERS and SAMUEL LEONARD, of Fayette, Pa.—*Improvement in Water-wheels.*—Patent dated February 25, 1862.—The wheel is provided with a concentric chute for about one-fourth of its diameter, more or less, and arranged with reference thereto in such a manner that the water lying dead in the penstock directly over the wheel shall have free and full effect upon the bucket or solid periphery of the wheel to its entire extent or width.

Claim.—The concave chute F, arranged as described, in combination with the superincumbent penstock C and the wheel A, substantially as and for the purpose set forth.

No. 34,476.—W. H. BLISS, of Newport, R. I.—*Improvement in Hose-Coupling.*—Patent dated February 25, 1862.—This invention is designed as an improvement on the patent of Lawton & Bliss, dated February 22, 1859.

A cylindrical pin, having a bevelled or taper inner end, is fitted within a tubular projection which has a screw cut in its outer surface, upon which a nut is fitted and works freely. Within the nut is a cellar formed of two distinct square parts, provided with a flange on the lower edges. Within the external butt, and opposite to the pin above named, is a lug or projecting piece having inclined sides, which tends to press the entering butt against the packing, the butt fitting in a corresponding groove—the whole affording a swivel joint, and securing a firm connexion of the two butts.

Claim.—First, connecting the nut D with the pin F, by means of the divided collar E, fitted in the nut and to the pin, substantially as shown and described, when said connexion is used in combination with the pin F and the groove *g* of butt B, for the purpose specified.

Second, the lug G within the butt A, when used in connexion with the pin F and the groove *g* of the butt B, substantially as and for the purpose set forth.

No. 34,477.—J. S. BRIGGS, of South Bend, Ind.—*Improvement in Mode of Starting Street Cars.*—Patent dated February 25, 1862.—Friction drums provided with flanges and secured to the axle are forced against the wheel, causing ropes attached to a cross-beam to be wound on the drum, thus drawing the cross-beam forward and contracting the spiral spring, which assists to stop the car. On starting the car the spring is released, when arms attached to the cross-beam by hinges are made to press their ends upon the track, and by the recoil of the spring serve to push forward and start the car.

Claim.—The application to street cars of friction drums and arms, in combination with spiral springs, for the purpose of acquiring and retaining power in stopping the car, to start the same again, in the manner described.

No. 34,478.—C. G. CASE and J. M. BAKER, of Battle Creek, Mich.—*Improvement in Automatic Machines for Weighing Grain.*—Patent dated February 25, 1862.—This invention consists in an arrangement for simultaneously closing the discharge-opening of one box and opening the discharge of another, when the required quantity of grain shall have been received into the box of the latter to counterpoise the weighted scale-beam—the supply of grain to the weigh-boxes, and the discharge of the same, being regulated automatically and wholly by the weight of the grain.

Claim.—The combination of the boxes C C', discharge valves E E, arms *f f*, connecting rod *g*, with the valve *k*, passages *i j*, and spring latches *o*, when arranged and operating in the manner and for the purpose set forth.

No. 34,479.—H. CASSEL and W. F. SEMPLE, of Fredericktown, Ohio.—*Improvement in Bellows for Blowpipes.*—Patent dated February 25, 1862.—Two receiving chambers, provided with ingress and egress valves, are secured to the under side of a platform, and are caused to be successively depressed and drawn out. The discharge chamber is placed on the upper side of the platform, and receives air from the chambers below. It is made to contract by a spiral spring which forces the air into the discharge opening and conveying tube. The successive depressions of the receiving chambers, to which motion is given by a treadle, causes a constant supply and flow of air through the conveying pipe.

Claim.—The chamber D, acted upon by spring *k*, in combination with the chambers B and C and air-conveying tube or pipe I.

No. 34,480.—C. T. CHESTER, of New York, N. Y.—*Improvement in Alphabetical Telegraphs.*—Patent dated February 25, 1862.—When a current of comparatively feeble power is passed through the wires of the magnet, it gives power enough to attract the armature, cause the lever to turn, and the pallet on the left to release one tooth. When the magnet power is withdrawn, a spring pulls the lever in a reverse direction, and a pallet on the right releases one tooth, thus allowing the indicator to traverse step by step and point successively to the letter on the dial. The transmitting apparatus consists of an arm whose shape allows it to pass over and around the dial without obscuring the letters. This pointer is attached to a hollow shaft with which it revolves. The transmitting part is attached to the hinged lid of the box containing the receiving apparatus. One dial is made to answer both for the receiving and transmitting apparatus, though their functions may be distinct and unconnected, by which means facility in working and ease in examining and adjusting the parts are gained.

Claim.—First, the use in alphabetical telegraphs of a train of wheels actuating an escape wheel, in connexion with pallets actuated by electro-motive force, when these parts are combined to operate an indicating needle, substantially in the manner set forth.

Second, the handle or pointer, with its hollow shaft, ratchet wheel, toothed wheel, two springs with adjustable points, combined substantially as described, and forming the transmitting apparatus.

Third, the arrangement for combination of these two parts of the complete instrument so that one dial answers for receiving and transmitting apparatus, and the parts may be instantly separated and examined substantially as described.

No. 34,481.—JOHN CHRISTY, of Baltic, Conn.—*Improved Smoothing Iron.*—Patent dated February 25, 1862.—The object of this invention is to provide a ready means of detaching the handle from the iron, to enable it to be kept cool while the iron is being heated, and also to make one and the same handle answer for a whole set or a number of irons of different sizes.

Claim.—The handle E, bar G, gravitating catch *i*, latch projection *j*, and legs C D, provided with feet *c d*, in combination with the oblong mortise B, ledges *a b*, and iron A, when arranged to operate in the manner and for the purpose set forth.

No. 34,482.—C. B. CONANT, of Hardwick, Mass.—*Improvement in Lifting Jacks.*—Patent dated February 25, 1862.—The hub or boss of polygonal form, being placed on the lower end of the screw, serves to guide the screw and keep it in a central position. The screw is elevated or depressed by means of the lever turning the ratchet and nut in one or the other directions. The pawl in one ratchet tooth being raised while the other moves.

Claim.—First, the combination with the stand A and screw C of the boss or hub D, collar G, and internal projection *a*, substantially as and for the purposes set forth.

Second, the combination with the screw C and stand-to of top or hub D, projection *a*, nut E, pawl J, guide collar G, holding collar K, and the pawl frame H, substantially as and for the purposes set forth.

No. 34,483.—Cancelled.

No. 34,484.—E. D. FOSS, of Maineville, Ohio.—*Improved Evaporating Pans for Saccharine Juices.*—Patent dated February 25, 1862.—The pan is divided into compartments which communicate with each other by a series of small equidistant ducts near the bottom of each partition, which ducts may be closed separately or simultaneously by means of gates, by which an equable flow of liquor is obtained. By the use of a draught plate the fire may be compelled to come in contact with the bottom of the last boiling pan, or the plate being elevated by a rod or handle, directs the fire more or less away from the said pan, and at the same time permits cool air to descend a tube through the hottest part of the sirup, and to mingle with and cool the heated gases beneath the said compartment. A pipe conducts the liquor from the last or coolest compartment of the first battery to the first or hottest compartment of the second battery.

Claim.—First, the series of small, equidistant apertures H, when used in the described combination with separate lever gates I I I, and all constructed and arranged in the manner and for the purposes shown and explained.

Second, the arrangement of the draught board M, rod N, and tube O, in the described combination with the last evaporating pan or compartment for the purpose of moderating the heat thereto, as explained.

Third, the provision of surface sluices J, constructed as described, for the easy discharge of scum, in the manner described.

Fourth, the combination of the two batteries A and A′, placed side by side, one higher than the other, when in other respects constructed and arranged in the manner shown and described and for the objects stated.

No. 34,485.—J. G. FREDENBURR and J. L. GEORGE, of Columbia, Cal.—*Improved Water-wheel.*—Patent dated February 25, 1862.—This invention relates to an improvement in under-shot wheels. A stationary chute is fitted to the lower part of the wheel, the front part of which extends down and is provided with ledges on each side. Plates on each side of the chute form guides for the wheels to fit in and for a close joint. A curved bar, the ends of which are secured to the ends of the chute, encompasses the wheel eccentrically, and serves to force inwards the buckets as they leave the back end of the chute, the buckets dropping on the ledges as they pass below the front end of the bar, and are exposed to the action of the water.

Claim.—First, the arrangement of the ledges *h* and the guide plates *i* with the sliding buckets *d*, chute E, and its enlargement *g*, as shown and described.

Second, the arrangement of the encompassing bar F with the buckets *d* and the chute E, as shown and described.

No. 34,486.—J. R. GILL and W. E. PALMER, of Alton, Illinois.—*Improved Washing Machine.*—Patent dated February 25, 1862.—The two toggles operated by the lever admit of an easy working of the swinging pressure board, which latter presses the clothes against an inclined stationary pressure board. The arrangement of the handle admits of a ready adjustment of the clothes by the operator.

Claim.—The combination and arrangement of the two toggles G I with the handle J, bar H, swinging pressure board D, stationary inclined board E, and suds box A, substantially as and for the purpose set forth.

No. 34,487.—CHARLES GOLDTHWAIT, of South Weymouth, Mass.—*Improved Clothes-Drying Apparatus.*—Patent dated February 25, 1862.—This invention consists in the employment or use of two cranes attached to a dwelling, one at each side of a door or window thereof, the cranes being provided with pins and lines, a connecting rod, and a stay or retaining bar, whereby the lines may be readily adjusted on the pins of the cranes, and the clothes readily placed on the lines from the door or window.

Claim.—The two swinging cranes C C, provided with the pins *f*, and attached to the dwelling A, in connexion with the connecting rod D, lines D′, and retaining bar E, all arranged substantially as and for the purpose set forth.

No. 34,488.—ASHMAN HALL and JOHN FAULKNER, of Dansville, N. Y.—*Improvement in Fanning Mills.*—Patent dated February 25, 1862.—The claim and engraving explain the nature and object of this invention.

Claim.—Making that portion of the sieves of fanning mill shoes which is exposed to the action of the fan blast concave longitudinally, as shown, for the purposes set forth.

No. 34,489.—H. HALL, J. HALL, T. HALL, and H. HALL, jr., of Philadelphia, Pa.—*Improvement in Metallic Cases for Pictures, Cards, &c.*—Patent dated February 25, 1862.—The cases are made in a mould, consisting of a flat plate having a boss on its upper face, which forms the inside of the mould. The outside consists of four separate pieces secured to the plate by means of pins which act as centres on which the pieces turn, so as to be closed up around the boss to complete the mould and release the frame after it has been cast. A piece of sheet metal is inserted over the boss, the ends of which project to the extent to which they are to be inserted in the cast metal, when the parts are secured together by the melted metal forming upon the edges of the plate in the mould.

Claim.—The new article of manufacture described, consisting of a metal case, composed of a cast metal frame and sheet metal top and bottom or sides, substantially as set forth.

No. 34,490.—WILLIAM HAMILTON, of West Pittsburg, Pa.—*Improvement in Mode of Securing Wheels to Axles.*—Patent dated February 25, 1862.—The nut is placed in the groove of the spindle, one piece being first inserted, and the other or others fitted to it. It should be held in place either by attaching the sectional pieces to each other, or to the spindle of the axle, or by confining them so that they shall not spread apart, which may be done in various ways.

Claim.—The use of a nut for securing wheels to axles, composed of two or more sections of a metallic ring, fitting into a groove in the axle in such manner as to fill the entire circumference of the groove, the sections of the nut being united and held in place independently of and detached from the pipe box or hub of the wheel, substantially in the manner and for the purpose described.

No. 34,491.—A. H. HASTINGS, of New York, N. Y.—*Improvement for a Piano.*—Patent dated February 25, 1862.—By inclining the scale the hammer may be attached in such a manner as not to attain a vertical position, so that after striking a chord it falls back to its position by its own gravity. The scale is made so as to be readily detached from the body, for convenience of transportation. The hammer is made hollow at its striking end, so that elasticity may be derived from the material of which it is made, without the use of leather or other material.

Claim.—The employment of the scale B, so inclined that the simplest and most effective form of action of the horizontal piano can be used while all the advantages of the upright piano are obtained, substantially as set forth.

Also, the employment of the hammer C, constructed and used as and for the purpose specified.

No. 34,492.—J. P. A. HAVARD and J. B. BOURGOISE, of Paris, France.—*Improvement in Portable Filters.*—Patent dated February 25, 1862.—The flexible sides of the upper receptacle are retained in a distended form by means of telescopic sliding tubes, the lower section of which is attached to one side of the case, the upper end being provided with a horizontal arm terminating in a hook for holding the bail. A metallic case answers the purpose of supporting the apparatus when in use, and holding it when packed for transportation.

Claim.—First, a filtering apparatus, consisting of two receptacles B C, formed of flexible water-proof fabric, filtering medium D, and wire gauze or perforated metallic disks *c d*, when combined and arranged in the manner substantially as described.

Second, the sliding tubes *n o p q*, arm *n′*, and bail *m*, arranged in combination with receptacle B, to operate substantially as described.

Third, the flexible sides of the receptacles B C, sliding tubes *n o p q*, case H, and packing case or bucket I, combined and arranged in the manner and for the purpose set forth.

No. 34,493.—W. H. HAVENS, of Paterson, N. J.—*Improvement in Projectiles for Rifled Ordnance.*—Patent dated February 25, 1862.—The expanding segments, which may be made of brass or other moderately hard metal or alloy, are so formed and arranged together that their exteriors form a cylinder of the same circumference as the exterior body of the shot, and their interiors fit the front portion of the conical part of the body. Tongues are formed on the front end of the segments to enter grooves; and on their rear ends are also tongues entering a ring of lead or other soft metal fitting in a groove. In firing the charge, the cone passes forward into the segments and expands them. The soft metal ring is made to expand radially against the walls to prevent windage.

Claim.—The combination with the conical portion of the part B and the part A of the independent sliding packing segments C C, all arranged and operating as shown and described.

No. 34,494.—PAUL HEILMANN, of Mulhouse, French Empire.—*Improvement in Machinery for Submitting Yarns to the Action of Liquids.*—Patented in England October 15, 1857.—Patent dated February 25, 1862.—The object of this invention is to submit lengths of yarn or thread, while in motion, to the action of liquid or gaseous bodies, for the purpose of sizing, mordanting, dying, or drying the same, and preparing them for spinning or weaving. The yarn or thread is drawn off in cops or bodies, and wound around drums or reels in the form of a helix, or one coil of thread beside the other, (a space being left between each coil,) the drums being given a continuous rotatory motion either in the air or immersed in a bath, whereby the yarn or thread will be exposed to the action of the fluid in which it is rotating.

Claim.—Submitting yarns or threads to the action of gaseous and liquid bodies for the several purposes described, by means of a system of reels, operating substantially as set forth.

No. 34,495.—J. N. HAWKINS, of Islip, N. Y.—*Improved Clam-Opener.*—Patent dated February 25, 1862.—The claim and engraving explain the nature and object of this invention.

Claim.—As an improved article of manufacture, a clam-opening instrument, composed of a base plate A, standard B, with guide arms *b b*, and a knife C, pivoted to the standard at *a*, all as shown and described.

No. 34,496.—C. F. HENDEE, of Waterbury, Conn.—*Improvement in Hoop Skirts.*—Patent dated February 25, 1862.—The spring and hinge are both perforated, and the clasp indented therein by means of a die.

Claim.—An invention in fastening metal hoops of hoop skirts; the indented metal

fastening, in combination with a metal hoop of a hoop skirt, provided with a hole to receive the indentation of the fastening, substantially as described, and for the purpose of preventing the fastening frame slipping from the hoop, substantially as set forth.

No. 34,497.—A. B. HENDRYX, of Seymour, Conn.—*Improvement in Hollow Augers.*—Patent dated February 25, 1862.—The cutters have a cylindrical hole in each end, countersunk on their under side. In each of these holes is fitted a flanged eccentric, inserted from the under side, and a screw passed through them from the outside, which also passes into the cutter head, and, when loosened, serves as a pivot for the eccentric to adjust the cutters, and secure them in position when adjusted. The face plate has four radial slots cut in it, in which are fitted to slide, by means of a scroll and disk, four dogs having flanges on their inner and outer sides for preventing longitudinal movement independent of the face plate. A conical or taper pin projects from the inner sides of the dogs, corresponding with a V-shaped scroll. The inner flanges, when clamped by the wedge nut, prevent the dogs and cutter heads from changing their position during the operation of boring.

Claim.—First, the eccentrics *i*, for adjusting the cutters of a hollow auger, in combination with the screws *j*, cutter heads *f*, and dogs *a*, when arranged to operate substantially as described.

Second, the combination of the V-shaped scroll *g* and conical or taper pins *e* with the inner flange *c* of the dogs, slotted face plate B, and wedge nut D, when arranged to operate in the manner described.

No. 34,498.—F. HOLLEN and A. H. PIERCE, of Blairsville, Pa.—*Improved Screw Wrench.*—Patent dated February 25, 1862.—This invention consists in giving to the inner surfaces of two jaws the form of racks, with ratchet teeth pointing in opposite directions, said jaws being connected by means of a hinge joint, and forced together by a suitable spring, in such a manner that a wrench is obtained which can be readily applied to burrs or small nuts of various sizes, and be operated with facility.

Claim.—A burr wrench with two jaws A A', the inner surfaces of which are provided with ratchet teeth *b b'*, and which are united by a hinge joint *a*, and forced together by a suitable spring C, in the manner and for the purpose shown and described.

No. 34,499.—JOHN HOLMES, of Boston, Mass.—*Improvement in Coal-Sifters.*—Patent dated February 25, 1862.—The sieve is a shallow bag composed of a series of small metallic rings connected by links, the edges of which bag are suspended from a ring; across the ring is a bar through which extends a rod attached at its lower end to the centre of the bag; an up and down motion of the rod causes the ashes to be sifted.

Claim.—The flexible sifter, constructed substantially in manner and so as to operate as specified.

No. 34,500.—NESTOR HOUGHTON, of New York, N. Y.—*Improved Spring Bedstead.*—Patent dated February 25, 1862.—The elastic laths are made thicker at their central parts than at the ends. Head and foot oscillating cross pieces are constructed to receive the ends of the laths in loose mortises in such a manner as to allow the cross pieces to vibrate to correspond with the general line assumed by the laths, which are allowed to accommodate any variation in their lengths between the points of support, caused by their being sprung into or out of direct line.

Claim.—First, the combination and arrangement of the elastic laths, made and constructed as described, with spiral springs, substantially as and for the purpose described.

Second, the combination with the laths 6 6' 6'' 6''' of the oscillating cross pieces 8, the parts being constructed, arranged, and operating substantially as set forth.

No. 34,501.—SOLOMON HUNT, of Danville, Ind.—*Improvement in Foot Stoves.*—Patent dated February 25, 1862.—The nature and object of this invention is fully explained by the claim and engraving.

Claim.—The combination of the radiator B, reflectors *g h*, and foot supports C C, with the lamp D, when operating in the manner substantially as described for the purpose set forth.

No. 34,502.—WM. JOHNSON and HENRY DAVIES, of Brooklyn, N. Y.—*Improvement in Bakers' Ovens.*—Patent dated February 25, 1862.—In connexion with flues beneath the oven, dampers are so arranged and applied that the heat may be passed directly from the fire through the oven, or through the flues beneath the oven, and thence through the chimney; or the heat may be passed directly through the oven and returned by the flues; so that the common oven may be adapted to different kinds of baking, and the heat regulated as circumstances may require.

Claim.—The application to an ordinary baker's oven, wherein the fire heat can pass directly into and through the oven, of the flues *a a* A and B, and dampers *h k f b* and *c* arranged in the manner and for the purposes set forth.

No. 34,503.—GILMAN JOSLIN, of Boston, Mass.—*Improvement in Heaters.*—Patent dated February 25, 1862.—A bar, rod, or plate of metal is arranged within the outer casing of the furnace in such a manner that the external air admitted thereto shall pass in the direction of the said rod or plate, and in contact therewith, and become heated during the passage. The expansion and contraction of the rod or plate, according to the quantity and temperature of the cold air admitted, is made to open and close a damper that regulates the draught of the fire.

Claim.—First, varying the temperature of the fire just in proportion to the quantity and temperature of the external air supplied to the furnace by means of a rod, plate, or bar, so arranged as to have the air so admitted, keep in contact with it and cause the expansion and contraction of the said rod, plate, or bar, thereby regulating the draught of the fire, as set forth.

Second, in heating apparatus, constructed to operate substantially as set forth, the arrangement of the lever arm, so that it can readily be inserted in or removed from its place by providing said lever with the projections *v* and *w* to fit into suitable sockets in the pieces which compose its fulcrum, as described.

No. 34,504.—E. M. JUDD, of New Britain, Conn.—*Improvement in Repeating Fire-arms.*—Patent dated February 25, 1862.—The loader is composed of an eccentric or cam-like plate, of a width greater than the diameter of the bore of the fire-arm, having a recess in its periphery for the reception of the cartridge from the magazine. The breech slide is fitted in the frame, and operated to open and close the rear end of the barrel by means of a trigger-guard lever, which works on a fulcrum pin. On the back of the slide is a toothed rack, which operates the loading and cocking devices. By the movement of the slide and the rack and pinion the loader is turned. The foremost cartridge first enters a recess in the loader, when, by withdrawing the trigger-guard lever, the cartridge is caused to enter the chamber of the barrel. A second pinion is secured to the loader to effect the cocking of the hammer by the opening movement of the breech slide, which turns a gear and dog in the opposite direction, and causes the tooth of the dog to press back the tooth of the hammer, and thereby throw the hammer to the position of full cock.

Claim.—First, the loader G constructed and applied in combination with the magazine and barrel, as described, and combined with the breach slide C by means of a rack and pinion, to be operated by the act of opening the slide, substantially as set forth.

Second, combining the hammer by the breech slide C and the loader G by means of a dog *k*, tooth *i*, and a system of rack and pinion gearing, substantially as and for the purpose specified.

No. 34,505.—W. S. KELLY, of Schenectady, N. Y.—*Improvement in Pumps.*—Patent dated February 25, 1862.—The annular spider consists of a ring and pronged arm of curved shape, to form stops for ball valves and for clamping screws. The ring being of less depth than the arms, forms a connexion with them at the centre of their depth in such a manner that when the spider is clamped between two surfaces a space exists, both above and below, between said surfaces and ring. A screw clamping plate, having passages cut through it, is let loosely into the piston after the spider and ball valves are introduced therein. The air-chamber, with a water-discharging nozzle on its side, is placed over the pump cylinder, and encircles the upper end of the hollow piston rod, which works, air and water tight, up and down in said chamber, a loose, ground stuffing-box connecting the two.

Claim.—First, the combination with the chambers A B of a double-acting pump, of a hollow piston rod G and piston F, the valves *g* of the piston F being arranged between upper and lower passages *d i*, and the same set of valves *g* serving alternately for closing said upper and lower passages, substantially as and for the purposes described.

Second, the combination of an annular spider H and screw plate I with hollow piston F and ball valves *g*, substantially as and for the purposes set forth.

Third, constructing the annular spider H with its arms *f* of greater depth than the depth of its ring or hollow hub *e*, substantially as and for the purposes set forth.

Fourth, the combination of the base valve box D, having a narrow stop bar *a* over the centre of each of its valve chambers, with the double-chambered pump A B, hollow piston F, and piston rod G, substantially in the manner and for the purpose described.

Fifth, The combination of the hollow piston F and hollow piston rod G with a stationary air-chamber J by a stuffing-box *j* at the lower end of the chamber J, substantially as and for the purposes set forth.

No. 34,506.—GABRIEL FARNER, of Marion, Pa.—*Improvement in Apparatus for Bending Tires.*—Patent dated February 25, 1862.—The sliding frame and middle roller are so arranged as to be elevated and depressed at pleasure by means of a screw passing through a bar of the stationary frame. Thus the relative position of the three rollers is changed so as to bend the tire to fit wheels of different sizes. The scale and index enable the operator to regulate the degree of curvature of the tire.

Claim.—The combination of the middle roller H, the sliding frame, the guides and central screw *d* with the scale Fig. 1 and index bar *c*, or its equivalent, substantially as specified.

No. 34,507.—C. T. JUDKINS, of Boston, Mass.—*Improvement in Gas Regulators.*—Patent dated February 25, 1862.—The edges of the cover to which the valve is attached turn down and fit into a trough containing quicksilver. The gas passes up through the valve opening into the outlet chamber, the cover rising and falling with the curved valve according to the pressure.

Claim.—The combination and arrangement of the valve H with the pivoted or hinged cover E, the lever O, and adjustable balance weight L, substantially as and for the purpose and objects set forth.

No. 34,508.—HERVEY KENT, of Lewiston, Maine.—*Improvement in Sliver Guides for Carding Engines.*—Patent dated February 25, 1862.—The sliver guide is combined with a circular disk, which is separate from and covers a circular opening in the top plate of a trough, through which runs an endless belt. The under side of the disk and edge of the opening are provided with teeth meshing into each other. By turning the circular disk around while covering the opening of the top plate the sliver passage or guide may be moved in a circular or curved path and be adjusted widthwise of the carrier, so as to cause a sliver, while being led through the guide, to be deposited on such part of the carrier as it may be desirable to have it laid.

Claim.—The application of the sliver guide or hole A to a carrier G, or its trough, by means of a circular plate B, or its equivalent, so as to be capable of being moved across the said carrier or trough, as the case may be, in a circular or curved path, substantially as and for the purpose of attaining results as set forth.

Also, the combination of the circular ranges of teeth *b b b c c c*, or their mechanical equivalents, with the guide plate B and the trough thereof, the same being arranged for the purpose and to operate substantially as specified.

No. 34,509.—EDMUND LOCKWOOD, of Ulster, Pa.—*Improved Shot-hole Stopper.*—Patent dated February 25, 1862.—A metal cap is provided with a flange having an elastic substance attached to its face, to cover the outside of shot-holes, and so that it will conform to the side of the vessel. To the centre of the cap is made fast a spindle extending to the inside of the vessel, the spindle having a cross-bar attached, by means of which, in connexion with a screw, the cap is drawn up and secured.

Claim.—A shot plug, consisting of a metallic plate or disk, the outside of which is convex, the inside lined with an elastic covering, having a spindle with bearded side springs, and a screw at its end, with a cross-bar in which the end screw is inserted; the parts being constructed and arranged relatively to each other substantially as and for the purposes specified.

No. 34,510.—SAMUEL LORING, of Duxbury, Mass.—*Improvement in Machine for Leathering Tacks.*—Patent dated February 25, 1862.—The tack carrier or conveyer is a deeply cut, perpendicular threaded screw, into which the tack is introduced, and by the advancing edge of its first thread is held between two of the threads, with its head supported by a slotted bar, by which it is prevented from being carried around by the conveyer, which latter, as it revolves, causes the tack to move to the opposite end of the slotted bar, where it is seized by a spring that presses it up against the last thread of the conveyer. The tack being released, falls into a box, the head passing through an opening, and beneath the arms of the nippers. The nippers carry the tack beneath the punch, which, in descending, cuts out a piece of leather and forces it upon the tack over its point.

Claim.—The spiral conveyer I, in combination with the slotted bar M, or its equivalent, for the purpose of separating and conveying the tacks, as set forth.

Second, the spring *b*, in combination with the cam *g*, for the purpose of carrying the tack round to the nippers, as set forth.

Third, the box *h*, in combination with the nippers, operating as set forth, for the purpose described.

Fourth, the punch C2, so constructed as to cut out the leather and force it down upon the tack, as set forth.

No. 34,511.—F. X. MANAHAN, of Utica, N. Y.—*Improvement in Cheese Vats.*—Patent dated February 25, 1862.—The longitudinal pipe in the water-box is of flat form and perforated at its sides, and is connected with the boiler by a pipe which is provided with a three-way cock, by which the water may be shut off from the perforated pipe and conducted into the smaller water-box. Another pipe provided with a cock connects the larger water-box with the under side of the boiler. The curd and whey being separated in the vat, the supply of water is shut off from the main box, whence it is made to pass into the smaller box, where, after being more highly heated, it is used for scalding the larger box. The method of securing the cock to the milk-vat by a pipe and screw socket is designed to prevent any leakage between the vat and box, and at the same time admit of the vat being readily removed from the box.

Claim.—First, the perforated pipe M, placed longitudinally at the bottom of the box A, and communicating with the pipe K, substantially as shown, for the purpose of equally distributing the ascending hot water from the boiler I, as set forth.

Second, the arrangement of the pipes K K′, cocks *k k′*, and pipes O L, with the boiler I, water-boxes A C, and milk-vat E, as shown and described.

Third, securing the cock F to the milk-vat E, through the medium of the pipe G and screw-socket H, arranged substantially as shown and described.

No. 34,512.—WILLIAM MASON, of Providence, R. I.—*Improvement in Connecting and Disconnecting Shafting.*—Patent dated February 25, 1862.—One part of the coupling consists of a disk or plate with two or more wedge-shaped segments fitted to slide radially between ribs cast on the face of the disk, and held in their places laterally by caps riveted to the ribs, said caps being connected to a sleeve on the hub of the disk by means of adjustable arms and joints. The sleeve has a groove to receive a shipper fork attached to a lever. The sleeve and wedge segment are so arranged, relatively, that when the sleeve is moved towards the disk the segments are forced outward and into a groove of the same angle and circle in the opposite part, thereby producing the necessary friction for driving the shaft. A reverse movement of the sleeve disconnects the shafting.

Claim.—First, the two rims united, A, or equivalent, forming the V-shaped recess, when used in combination with the wedge segments C C and toggle-jointed connexions as described substantially as specified.

Second, the wedge segments C C, when used in combination with the arms, disk, and sleeve, as described, for the purposes set forth.

Lastly, the application of the above-described mechanism to shafting, gears, or other wheels rotating upon the shaft, for a friction coupling, substantially as specified.

No. 34,513.—W. M. MASON, of Polo, Ill.—*Improvement in Machines for Stacking Hay.*—Patent dated February 25, 1862.—To the upper part of a standard is secured a swinging crane, from the arm of which, by means of a rope and pulleys, is suspended a fork, which, by means of toggles and teeth, is made to clasp and hold a quantity of hay, &c. By pulling a rope attached to the fork the teeth are caused to distend, and the hay is dropped.

Claim.—The combination of the toggles I, pulleys *l m*, and rope J with the fork H, constructed as described, in the manner and for the purpose shown and set forth.

No. 34,514.—IRA MCDANIEL, of Salem, Iowa.—*Improved Washing Machine.*—Patent dated February 25, 1862.—The lower section of the washboards is corrugated, and rests on four rollers. A forward and backward movement is given to it by means of the crank, shaft, and attachments.

Claim.—The application of the crank C and shaft D to the lower section of the washboard A, giving it the vibratory motion in the rectangular tub R, all arranged and operated substantially as and for the purpose specified.

No. 34,515.—E. B. MCCOY, of Winsted, Conn.—*Improved Roller Press for Photographs, &c.*—Patent dated February 25, 1862.—The reciprocating bed rests upon two rollers, guides on the under side of the bed fitting in grooves on the rollers. A semicircular frame bears upon the journals of a roller which rests upon the reciprocating bed. Upon one of the journals of two rollers, which projects beyond the frame, is secured a wheel, by rotating which, the article to be pressed on the bed, is made to pass backward and forward under the roller.

Claim.—The combination of the reciprocating bed C, roller F, and frame E, when arranged substantially as and for the purpose set forth.

No. 34,516.—NELSON MCCUEN, of South Potsdam, N. Y.—*Improvement in Harrows.*—Patent dated February 25, 1862.—The height of the evener is designed to be regulated according to the nature of the soil, and thus maintain the proper line of draught between the shoulders of the drawing animals and the evener. By arranging the frame which receives the teeth, with obtuse angles, no two of the teeth follow in the same track.

Claim.—A drag having the evener E supported upon adjustable rollers, and having the bars *a* bent at obtuse angles to the bars B, the teeth being arranged to said bars as set forth, and the whole constructed otherwise as shown and described.

No. 34,517.—J. VAUGHN MERRICK, of Philadelphia, Pa.—*Improved Slide-valves for Steam Engines.*—Patent dated February 25, 1862.—Through the sliding-valve pass two openings, each of which is of the same length, and of the same, or nearly the same, width as one of the steam-ports. A central opening situated midway between the above-mentioned openings also passes directly through the valve. An equilibrium or balancing-plate, provided with projections at opposite ends, bears on the upper surface of the sliding-valve, and maintains the latter in its proper longitudinal position. Within the balancing-plate are formed two chambers, and midway between the latter a central chamber, the two former terminating in two ports, and the latter having an opening directly opposite to the exhaust port in the face of the cylinder.

Claim.—A slide-valve and balancing-plate, in combination with a double-ported cylinder face, when the said valve is provided with such openings, and the said balancing-plate with such chambers and ports, as to permit the steam to pass to and from the cylinder, substantially in the manner set forth.

No. 34,518.—O. E. MILES, of Aurora, Ill.—*Improvement in Construction of Wheeled Vehicles.*—Patent dated February 25, 1862.—The wheels are secured to conical arms, the larger ends of the arms being fitted in boxes placed in cast-iron frames, which are prevented from any lateral motion, being braced by steel rods connected by bolts to the bolster. The journals of the inner ends of the arms have their bearings cast in two equal parts, which, by means of trunnions, rest upon the ends of a cast-iron frame. Resting upon the trunnions are levers which keep the trunnions in proper position on the frame.

Claim.—The arms C C, having the wheels B B permanently attached to them, and their inner journals fitted in boxes F, suspended on trunnions *l*, and their outer journals fitted in boxes D, placed in frames E, attached to the bolster, when said parts are used in combination with the rods *f*, arranged substantially as shown for bracing the frames E, and with the frame *m*, in which the trunnions *l* are placed, and also with the levers *r r*, arranged substantially as shown, for securing the trunnions *l* on frame *m*, as and for the purpose set forth.

No. 34,519.—JEHIEL MUNSON, of Burlington, Vt., and J. R. LYON, of Shelburne, Vt.—*Improvement in Potato-Diggers.*—Patent dated February 25, 1862.—The perforated flanges are secured to the upper edges of the wings. The rods pass from the frame above into holes in these flanges, and may be adjusted to a greater or less distance apart. The upper ends of the rods are bent over on the frame and held in position by a clasp passing over them, and secured by a bolt or key.

Claim.—The arrangement of the adjustable separating rods F, in combination with the perforated flange or lip 4¼, the perforated frame D, and separator clasp E, substantially in the manner and for the purpose specified.

No. 34,520.—DAVID O'FLANAGAN, of Charlestown, Mass.—*Improved Fruit Strainer.*—Patent dated February 25, 1862.—A cylindrical box is provided with a concave perforated bottom which serves as a sieve, and over which rotates a stirrer having a curved blade corresponding to the curvature of the bottom. The stirrer is attached to a frame hung to an arbor, to which a rotary motion is given by means of gear-wheels and a crank.

Claim.—The box A, provided with a concave perforated bottom *a*, in combination with the curved rotating bar, or stirrer, E, when suspended from the cover B, and constructed, arranged, and operated as and for the purpose set forth.

No. 34,521.—W. J. PALMER, of Flushing, N. Y.—*Improvement in Lamps, &c.*—Patent dated February 25, 1862.—An air or draught chamber perforated with holes is attached to the top of the cap. The interior of the cap forms a chamber in which the vapor or gas in the upper part of the lamp is designed to be condensed as it ascends, thereby preventing explosions, and also preventing the escape of the vapor or gas from the lamp and consequent waste of oil.

Claim.—The combination with the cold air or draught chamber C, of the dome-shaped gas-condensing channel *c*, as and for the purpose shown and described.

No. 34,522.—Cancelled.

No. 34,523.—JOSEPH REICHMAN and HEINRICH KRIETE, of Chicago, Ill.—*Improved Governor Valve.*—Patent dated February 25, 1862.—The specification describes an arrangement of devices, by means of which the steam from the boiler and that from the cylinder of the engine are permitted to act against each other upon a piston or its equivalent; any difference between the pressure of the two, regulating the quantity of steam admitted to the cylinder of the engine, to operate the same with equal speed. Also an arrangement for counterbalancing the piston, upon which the boiler steam and that of the cylinder act against each other.

Claim.—First, the use of the steam of the boiler and that of the engine acting against each other, to operate the governor valve, or its equivalent, of a steam engine.

Second, the peculiar construction and combination of the whole governor, as described.

No. 34,524.—JOHN REVERE, of Boston, Mass.—*Improvement in Preparing Metallic Moulds for Casting Metals.*—Antedated November 22, 1861.—The inner surface of the mould, after being roughly annealed, is washed with a hydrated solution of pulverized clay and wood ashes until the pores of the iron are completely filled and a coating formed which shall prevent any contact of the metallic surface with the metallic bronze. Over said coating, and while the mould is in a warm state, is next applied a coating of lampblack dissolved in spirits of turpentine or alcohol; or instead thereof a liquid resinous substance may be used.

Claim.—In preparing a metallic mould for casting ordnance or articles of bronze, not only heating the mould so as to anneal it and burn and oxidize its inner surface, but in afterwards applying to the said surface the earthy wash and to the latter a resinous coating, substantially as specified.

No. 34,525.—R. A. RILEY, of Greenfield, Ind.—*Improved Mode of Preventing Jarring and Jolting Railroad Cars and Locomotives.*—Patent dated February 25, 1862.—A short rail is placed upon the chair on the inside of the track, breaking or lapping the head-joint of the rails, the face of said rail being below that of the main rail to the extent of the width of the flange of the car wheel. Frogs and switches are similarly provided with bearing surfaces for the edge of the flange.

Claim.—The faced flange on the car wheels of uniform depth; the low rail on the chair on the inside of the track lapping the head-joints of the rails to support the car on the flange of the wheel while passing over the same; the face on the frog and the face on the switch to receive and support the car on the flange of the wheels while passing over the head-joints and open spaces thereon; and all these in combination fitted and adapted to each other, by which all open spaces in the track of railroads are practically closed, and the even plane of the cars in motion upon the track at all points maintained.

No. 34,526.—THOMAS ROGERS, of Montgomery Square, Pa.—*Improvement in Liquid Measures.*—Patent dated February 25, 1862.—Within the measure is a tightly packed piston, to which is secured one end of a rod, which projects downwards through an opening in the bottom of the measure. To the upper edge of the measure is hinged a cap or cover, provided with a tube, through which the liquid is forced when the measure is inverted; the object being to discharge from the measure all the sirup, a part of which is apt to adhere to the sides of the vessel.

Claim.—The measure A, with its piston G, and the movable cap D, with its tube *c*, the whole being constructed and arranged substantially as and for the purpose set forth.

No. 34,527.—DANIEL SAGER, of Albany, N. Y.—*Improvement in Self-acting Brakes for Wheel Vehicles.*—Patent dated February 25, 1862.—The curved links are at the forked ends of two metal plates, between which the rear end of the draught pole is fitted. Two levers are secured to the under side of the hounds by fulcrum pins passing through oblong slots in the levers, thus admitting of a longitudinal movement of the levers. The brake blocks are applied to the wheels by the forward movement of the vehicle in descending hills. A forward movement of the draught pole again releases the brakes.

Claim.—The combination of the curved links C C with the pole A and levers D, as shown and described. The arrangement of the levers D D to slide longitudinally as well as turn circularly upon the axis pin, as shown and described.

No. 34,528.—ANDREW SAWYER and HENRY BARNES, of Burlington, Wis.—*Improvement in Cultivators.*—Patent dated February 25, 1862.—The teeth or shares are attached to a frame provided with guide rods that are fitted on the axle, the frame being attached by chains to segments secured to a rock shaft, and so arranged as to be operated by the attendant.

Claim.—The arrangement of the pendulous suspended frame C, attached draught pole F, shares E, rods D, and chains D' D', with the segments K K, rock shaft I, and lever J, in the manner shown and described.

No. 34,529.—E. S. SCRIPTURE, of New York, N. Y.—*Improvement in Oil Cans.*—Patent dated February 25, 1862.—A spring, supported in rests attached to the protecting ring, extends across the bottom of the can. Through the ring passes a screw, which, in connexion with a nib, operates the bottom of the can, the degree of tension regulating the amount of oil and distance it is to be thrown.

Claim.—First, the use or employment of the protecting ring C, provided with the spring rests D D, arranged and operating as shown for the purpose specified.

Second, the bottom B, regulating screw H, and spring F, supported upon the rests D D, or their equivalents, when the same shall be combined and operated in the manner and for the purpose specified.

No. 34,530.—MELVIN SHAW, of Abington, Mass.—*Improved Composition for Dressing Leather.*—Patent dated February 25, 1862.—This composition consists of extract of logwood, borax, gum shellac, bichromate of potash, and spirits of ammonia, each ingredient requiring a separate process of preparing before compounding.

Claim.—A dressing for leather, consisting of an alkaline solution of shellac, in combination with a solution of logwood.

No. 34,531.—S. J. SHERMAN, of Brooklyn, N. Y.—*Improvement in Springs for Ladies' Dresses.*—Patent dated February 25, 1862.—The end of the steel spring is provided with a curved piece of soft metal, previously formed in suitable dies, the metal being firmly secured to the steel by being compressed between dies adapted to spread the end of a tubular projection through the hole in the spring, and flatten the sides of the curved metal; the object being to obviate the bad effects of the sharp edges of steel coming in contact with the fibrous material by which it is confined.

Claim.—A spring or busk for clothing, having the ends covered by a soft metal, applied and secured substantially in the manner specified and for the purposes set forth.

No. 34,532.—D. H. SHIRLEY, of Boston, Mass.—*Improved Railroad Switch.*—Patent dated February 25, 1862.—The switch is formed of a plate of metal having a groove or slot on its under side conforming in its cross section, or nearly so, to the cross section of a rail. Upon its upper surface is an inclined way with a lip for guiding the flanges of the car wheel passing over the switch. The object of the device is to provide a temporary means for running the car from and upon the track in case of obstructions.

Claim.—A portable switch having as its essential elements a curved inclined way or groove, in combination with a suitable locking or clutching device for securely holding the switch firmly upon the rail, substantially as described.

No. 34,533.—S. J. TAYLOR, of Rome, N. Y.—*Improved Convertible Straw Cutter and Corn Sheller.*—Patent dated February 25, 1862.—The conically shaped drum and the spiral ribs are so constructed and arranged as to admit of the attachment of the spiral knives when used for a straw cutter, and of the spirally ribbed feed-plates when required for a corn sheller; the one being removed while the other is in operation.

Claim.—The bed piece B, gear wheel D, pinion F, spiral ribs *b*, and drum A, combined, arranged, and adapted for the attachment of the spirally-ribbed feed-plates *j*, or spiral knives G, all as and for the purposes substantially as described.

No. 34,534.—W. H. VAN GIESON, of New York, N. Y.—*Improvement in Nails for Sheathing.*—Patent dated February 25, 1862.—The grooves in the nail are designed to give a greater external surface to the shank than the cylindrical form, by which a stronger hold in the wood and a more ready penetration are attained.

Claim.—A sheathing nail made with converging flanges and with grooves between the flanges, said flanges converging at the point of the nail and the grooves terminating a short distance below the head, as shown and described.

No. 34,535.—DAVID WALKER, of Newark, N. J.—*Improved Self-rocking Cradle.*—Patent dated February 25, 1862.—The balanced pallets are provided with relief guides or gauges, which guide the pallets into the teeth of the escapement wheel when the pallets are moving in one direction, and allow them to rise out of contact with those teeth when moving in the opposite direction, to prevent injury when the power of the spring becomes exhausted and the motion of the wheel slackens. The fan is put in motion by means of cords attached at one end to a cross lever on the bar holding the fan, and being crossed, their outer ends are attached to opposite sides of the cradle. Stops on the cradle and frame prevent the cradle from swinging too far on either side.

Claim.—First, the construction and arrangement, substantially as described, of the relief guides *c*, in combination with pallets *a* and escapement wheel *b*, in the manner set forth and for the purpose specified, when used in a self-rocking cradle, constructed as described.

Second, in combination with a self-rocking cradle, constructed as described, the stops *e* and *h*, constructed and arranged as and for the purpose described.

Third, in combination with a self-rocking cradle, constructed as described, the automatic fan *k n m r*, constructed and arranged as described and shown, and operated by the movement of the cradle in the manner specified.

No. 34,536.—G. W. WALKER, of Boston, Mass.—*Improvement in Sliding Grates.*—Patent dated February 25, 1862.—A dog or stop is hinged to an ear on the upper surface and near the front of the frame; the dog has a projection which extends below the front part of the frame to arrest the grate when the latter is pulled forward. By raising the dog the grate may be drawn entirely out of the frame.

Claim.—The arrangement and combination of the movable dog C, with the sliding grate A and its supporting frame B, the whole being to operate together as specified.

No. 34,537.—J. H. WALKER, of Worcester, Mass.—*Improved Machine for Pricking Leather.*—Patent dated February 25, 1862.—The holding and pricking plates have a vertical motion to and from each other in guide projections secured above and below the table upon which the leather is placed; the lower plate being provided with a series of sharp points on its upper edge, and the upper plate with a corresponding series of holes. By means of a system of levers and springs operated by a foot lever, the two plates are drawn together, hold the leather, and perforate it, the springs serving to withdraw the plates on freeing the foot lever.

Claim.—First, the combination of the holding plate F, and pricking plate F′, with table C, and its dovetailed guide, stands, or projections E E E′ E′, as and for the purposes set forth.

Second, the combination and arrangement of plates F F′, and tables A C, with forked levers H J and springs G G′, substantially as set forth.

Third, the combination in the same machine of a perforated stationary table, having a holding plate above and a pricking plate below, with mechanism so combined with said plates that leather placed on the table and under the holding plate can be held by the upper plate while it is pricked by the points or awls in the lower plate, by simply depressing a foot lever, substantially as set forth.

No. 34,538.—W. F. WARBURTON, of Philadelphia, Pa.—*Improvement in Military Hats.*—Patent dated February 25, 1862.—The rear half of the sweat band is disconnected from the front half, so that the former can be drawn forward from the body of the cap. The cape is secured between the rear part of the sweat band and the body of the hat, so that when not in use it may be packed and secured in the hat, and allowed to fall readily when desirable.

Claim.—The cape or curtain D and movable sweat band C, when so combined and arranged that the sweat band shall serve to retain the cape in an elevated position, and when moved shall permit the cape to fall, as set forth, for the purpose specified.

No. 34,539.—H. H. WARDEN, of New York, N. Y.—*Improved Ship's Armor Plates.*—Patent dated February 25, 1862.—The frame is made in rectangular form of cast-iron or steel, with a web or lattice-work of wrought-iron imbedded in it when it is cast. The object of this invention is to obtain plates of cast-iron for covering ships-of-war, which, while they are liable to fracture like other cast-iron plates, do not fall off and leave a bare spot on the side of the ship.

Claim.—An armor plate for ships composed of a wrought-iron frame imbedded within a cast-iron body, substantially as shown and described.

No. 34,540.—EMANUEL WASSENICH, of Cincinnati, Ohio.—*Improvement in Portable Ovens.*—Patent dated February 25, 1862.—The oven is to be covered with earth: the peculiar shape and construction being designed to give strength and secure equality of radiation, as well as facility for setting up and taking apart for transportation.

Claim.—Constructing a portable army oven A, of boiler iron, of the shape described, viz: semi-elliptically prismoidal, with arched ends *a a*, and strengthened by ribs B B, connecting hooks H, and beams C C, substantially as and for the purpose set forth.

No. 34,541.—JOHN WELDY, of Dayton, Ohio.—*Improved Machine for Sawing Wood.*—Patent dated February 25, 1862.—The saw beam is connected with the rock shaft by means of perpendicular links vibrating on an arm which is attached to links upon the rock shaft and its lever. By drawing back the lever of the rock shaft, which may be retained in position by a latch, the saw is raised so that the wood to be sawed may be placed on the carriage. On releasing the rock shaft lever, the saw comes down upon the wood, ready for operation. The upright links are kept in position by a fixed bar over which they traverse.

Claim.—The combination and arrangement of the rock shaft G, arm H, links *h h*, and saw beam J, constructed to operate substantially as described, for the purpose set forth.

Also, in combination with the links which support the saw beam, the guide bar *i*, substantially as described, for the purpose set forth.

No. 34,542.—ANTHONY WERNÉ, of Pittston, Pa.—*Improved Apparatus for Making Vinegar by the Quick Process.*—Patent dated February 25, 1862.—Upon the acetifying vat is fitted a tub having an air-tight, removable cover. In the bottom of the tub are fitted tubes extending to nearly the top of the tub for the purpose of conducting off the gases and vapors from the lower vat. Over the tubes is placed a shield which prevents the liquid from entering the said tubes and distributes the liquor, which is poured in at the top and passes through perforations in the bottom of the tub. A perforated elbow-shaped tube, closed at the top and leading to the outside of the vat, is placed in the centre of the vat. By removing the stopper at the outer end of this tube, external air is admitted, when it is desirable to reduce the temperature of the vat. The vapors, gas, and air in the vat are conducted to a condenser by a pipe leading from the top of the tub.

Claim.—The employment of the distributing shield C, in combination with the tubes *b* and tub B, as and for the purpose shown and described.

Also, having the bottom of the tub B provided with small tubes *a*, as and for the purpose shown and described.

Also, the tube H, arranged and operating with the generator A, as shown and described.

Also, the combination with the generator of the condenser J, constructed substantially as shown, and tube I, as and for the purpose shown and described.

No. 34,543.—W. H. WHITE, of Dubuque, Iowa.—*Improved Roofing.*—Patent dated February 25, 1862.—The composition is secured to the roof by means of strips of wood or other material bevelled inwardly and fastened to the sheathing; the composition being put on in a plastic state, works under the bevelled edges of the said strips, and forms, as it were, a dovetailed joint.

Claim.—First, the roof, constructed of the materials, and in the manner, substantially as described.

Second, the dovetail fastening, as described, for the purpose set forth.

Third, the combination of common salt, sand, coal, coal tar, and coal ashes, to form a roof, in the manner specified.

No. 34,544.—THOMAS WILSON, of Silver Creek, Ill.—*Improvement in Running Gear of Railroad Cars.*—Patent dated February 25, 1862.—The connecting rods contain the tension springs, and cross each other, the object being to insure a steady motion without jarring, by keeping the trucks in constant communication, the movement of one being transferred to the other.

Claim.—The employment of tension springs between the trucks and their connecting rods, in combination with independent wheels, substantially as shown and described.

No. 34,545.—S. S. BARTLETT, of Providence, R. I., assignor to T. H. DODGE, of Washington, D. C.—*Improvement in Harvesters.*—Patent dated February 25, 1862.—The claims and engravings explain the nature and object of this invention.

Claim.—First, supporting the rear end of a drag bar, arranged to run on the ground at the

side of the machine, with its rear end free to rise and fall, by means of an adjustable arm or lever, whose front end is supported by the axle or journal of the main wheels and on the outside of the inner wheel, substantially as described.

Second, the combination with the inner end of the axle or journal of the main supporting wheels of a grass harvester, of an elevating arm or lever, whereby the rear end of its hinged drag bar can be raised and lowered together with the heel of the finger-beam by the driver, from his seat on the machine, while the elevating arm or lever has a firm support, independent of the frame, substantially as described.

Third, the combination of the drag bar and compound lever arrangement with the main frame and finger-beam of the machine, substantially as and for the purposes set forth.

No. 34,546.—FREDERICK CHANDLER, of Charlestown, Mass., assignor to Himself and C. A. COUSENS, of Newton, Mass.—*Improvement in Camp Stoves.*—Patent dated February 25, 1862.—The pipe is constructed of a series of tubes, provided with lips fitting upon their upper and lower edges, and placed one within another, so that they will readily slip upon each other, and yet firmly hold together when set up, and when not in use be enclosed within the stove.

Claim.—First, forming a sectional stove-pipe in such a manner that the sectional pieces, whether straight or tapering, shall be held together and to the stove by flanges or other positive mechanical devices, to prevent their dismemberment from each other or from the stove.

Second, so combining a sectional stove-pipe, constructed in the manner described, with a stove, as to permit the said sectional stove-pipe to be packed and enclosed by the stove, as described.

No. 34,547.—J. F. DRUMMOND, assignor to C. T. REYNOLDS, F. W. DEVOE, and CHARLES PRATT, of New York, N. Y.—*Improvement in Packing Cans for Transportation.*—Patent dated February 25, 1862.—The cans, which are cylindrical in form, are placed within a box, the bottom of which is provided with a series of circular recesses fitting the bottoms of the cans. Corresponding recesses of suitable size are made in the lid of the box. The lid being closed and fastened, the cans are held securely in position by the recesses.

Claim.—The method of preventing the indentation, leakage, and weakening of paint cans, shown and described.

No. 34,548.—JAMES EASTERLY, assignor to Himself and DENNIS G. LITTLEFIELD, of Albany, N. Y.—*Improvement in Stoves.*—Patent dated February 25, 1862.—The gauze is placed nearest the fire, and is designed to protect the mica from contact with the smoke, flame, and ashes, thus allowing the mica to retain its original lustre.

Claim.—A window or door for stoves, furnaces, and every character of heater, combining the properties of metallic gauze and of mica or other transparent material, for the purpose specified.

No. 34,549.—G. W. LA BAW, assignor to Himself and P. F. CAMPBELL, of Jersey City, N. J.—*Improvement in Springs for Carriages, Wagons, &c.*—Patent dated February 25, 1862.—The supporting bars cross each other, and their lower ends rest in boxes provided with India-rubber springs, which arrangement tends to keep the wagon body parallel with the axis. Buffer-springs are placed upon the axle to prevent the bars from coming too low.

Claim.—First, the toggle-joint bars *b b*, in combination with the boxes *c c*, containing the springs of India-rubber, as and for the purposes specified.

Second, the cushions or buffers *f f* of India-rubber applied to take the toggle-joint bars *b b*, in the manner and for the purposes set forth.

No. 34,550.—T. S. LAMBERT, assignor to H. W. HUNT, of Peekskill, N. Y.—*Improvement in Double Windows.*—Patent dated February 25, 1862.—The doors are designed, in whole or part, to contain paper, plain or colored, instead of glass. Removable stops or strips are placed between the door and outer window for the door to abut against.

Claim.—The combination of light sash doors, hung to the inside stops of a window, with the movable stops K K L, so that when the door is closed it will abut upon the outer window sash, making in effect a double window, as and for the purposes set forth and described.

No. 34,551.—W. T. POGUE, of Vienna, Ind., assignor to GEORGE HELY, of Richmond, Ind.—*Improvement in Apparatus for Holding Wagon-Wheels while Loading.*—Patent dated February 25, 1862.—The claim and engraving explain the nature and object of this invention.

Claim.—The arrangement of the rods B B F, swivel C, clevices D D D D, in combination with the wheels A A, the better to effect the purpose described, the whole being constructed substantially as described.

No. 34,552.—A. J. SCOVILLE and A. H. DE CLERG, of Bloomington, Ill.—*Improvement in Pistons for Steam-Engines.*—Patent dated February 25, 1862.—The object of this invention is to dispense with the use of springs or other mechanical contrivances for adjusting and regulating metallic packing of steam-engines. Steam is caused to enter against the edges of the rings to press them over to the opposite side of the piston-head with the valve-rings and holes, by means of which, steam is admitted at the same time into the piston-head and against the inner surface of the piston-rings, thus pressing them against the cylinder.

Claim.—The valve-ring, with the holes opening against it through the flange of the piston-head and through the follower, constructed and operating substantially as described.

Also, the combination of the small holes through the flange of the piston-head, and through the follower, against the edge of the outside rings, with the inside and outside piston-rings and the valve-ring, and holes opening against it through flange of the piston-head, and through the follower, the whole arranged and operating substantially as described.

No. 34,553.—E. W. SEYMOUR, of Centre Lisle, N. Y., assignor to Himself and G. W. GREGORY, of Binghamton, N. Y.—*Improvement in Shifting Hinge-joint or Coupling-shafts of Wagons.*—Patent dated February 25, 1862.—The hinge-joint or coupling is so constructed that by elevating or turning that part of the hinge which enters the slot of the barrel and pivot which revolves in the barrel part of the hinge at a certain angle, it will enter said slot, and thereby operate as a lever, form the joint, and securely attach the hinge.

Claim.—A shifting hinge-joint or coupling, constructed in the following manner, to wit: the combination of the barrel A with the pivot C and slot D with the arm H and its shoulder G, as and for the purposes described.

No. 34,554.—J. L. TREAT, assignor to YALE and CURTIS, of New York, N. Y.—*Improvement in Drawing Apparatus for Portable Vessels.*—Patent dated February 25, 1862.—The inner vessel is fitted loosely within and suspended by a helical spring to the top of the outer one, the frame being open at the bottom and closed at the top, with the exception of a small opening. Attached to the under side of the top cap is a sleeve through which plays a spindle, by pressing on the button of which, the shell is depressed and the valve closed. The air having no means of escape, acts upon the surface of the liquor and causes it to rise in the space between the shell and vessel, to be discharged through the spout. A release of the pressure on the spindle allows the valve to open and the air to enter to supply the place of the liquor drawn off.

Claim.—The vessel A, having an inner shell B, fitted loosely within it, and suspended from the cover of the same by a vertical spring *d*, the said shell being open at the bottom and provided with an aperture *c* in the top, which is closed when liquor is drawn from the vessel, by a valve *j*, actuated by the same pressure that forces the shell down and causes the liquor to flow from the spout of the vessel, when arranged to operate in the manner substantially as described.

No. 34,555.—J. S. ATTERBURY, J. REDDICK, and T. B. ATTERBURY, of Pittsburg, Pa.—*Improvements in Moulds for Glassware.*—Patent dated March 4, 1862.—The mould is composed of a base plate with a projection of spherical form projecting up from its top, and a section having a semispherical recess on which the bas-relief design is engraved or wrought. Just above the recess is a partition through which an orifice extends down to the recess. Above the partition is a cylindrical chamber provided with a plunger and follower. Melted glass of red color is poured into this chamber and pressed through the orifice into the recess, upon which, by another process, glass is blown and a bowl or peg is formed on the inner surface of the prism.

Claim.—First, the means and manner, substantially as described, of pressing articles of glassware in bas-relief.

Second, the means and manner of uniting the bas-relief glass-work to the outer surface of blown glassware, substantially as described.

No. 34,556.—B. H. BARTOL, of Philadelphia, Pa.—*Improvement in Steam Boilers.*—Patent dated March 4, 1862.—The tubular flue is arranged at the rear of, and nearly as low down as the furnace, thus allowing the boiler to be so far reduced in height as to be contained in the hold of a vessel of light draught, and be less exposed to the effects of an enemy's shots.

Claim.—The furnace B, diving flue H, one or more horizontal flues J, and the return flue M, with its vertical tubes, the whole being arranged within the casing A, as and for the purpose set forth.

No. 34,557.—J. A. BASSETT, of Salem, Mass.—*Improved Apparatus for Carbureting Gas.*—Patent dated March 4, 1862.—This apparatus consists of a vessel containing a series of annular passages, arranged concentrically one within another, around an upright axis, and communicating with each other on opposite sides alternately, and a second vessel filled with a porous material above the first-named vessel, and communicating therewith by means of an interposed valve attached to the same stem with an inverted cup-shaped float arranged in the lower vessel, and with a valve at the mouth of the inlet, by which the gas enters the latter vessel from the main. Both of the vessels contain naphtha or other volatile hydro-carbon liquid, and the lower vessel serves partly to effect the naphthalizing process, but mainly as a

cooler to cool the gas before its advent to the upper vessel in which the naphthalising process is mainly performed. The inverted cup and valves operate to nearly shut off the gas when the liquid in the lower vessel gets low, to give notice that the said vessel requires replenishing.

Claim.—First, the combination, substantially as described, of a vessel A, in which the gas passes circuitously over the surface of the hydro-carbon liquid, to be partly carbureted and cooled by the evaporation of the liquid, and a vessel B, containing a porous substance, and saturated with such liquid, through which the gas subsequently passes, as set forth.

Second, the gas-regulating valve *j*, and float *k*, combined with a gas-naphthalizing or carbureting apparatus, substantially as specified—that is to say, with the float floating in the naphtha or other hydro-carbon liquid used for the carbureting process.

No. 34,558.—R. H. BLAIR and A. W. BEATTY, of Saltsburg, Pa.—*Improvement in Horse-Rakes.*—Patent dated March 4, 1862.—The upper ends of the wire rake teeth are fitted in a bar which turns freely in eyes or bearings attached to the back of the axle. From this bar project arms, to which are secured rods connected with a crank operated by a lever on the forward part of the machine. The rods are also connected above to springs by links, which are designed to keep the teeth elevated above the surface of the ground. By drawing back the lever and securing it in the rack plate, the teeth are secured in working position.

Claim.—The connecting of the bar K, of the rake, to springs Q Q, through the medium of the arms J J, rods O, and links P, in connexion with the rods I I, crank shaft F, lever G, and rack plate E, all arranged and mounted as shown, to operate as and for the purpose set forth.

No. 34,559.—J. M. BLAKE, of Madison, Wis.—*Improvement in Horse Powers.*—Patent dated March 4, 1862.—Through each end of the connecting blocks which form the apron, near the under side and one-quarter of the distance from either end to the other, holes are bored, through which pass coupling rods transversely to the blocks, and in the centre of all the blocks in the second tier thereof mortises are made, into which are fitted supports parallel to the coupling rods. The ends of all the blocks in the other tiers are framed in such a manner as to rest firmly on the supports when any part of the apron is in a straight line, thus rendering the apron self-supporting and inflexible. The drums may have any desired number of sides, to conform to the sections of the apron, and are provided with teeth catching into supports to prevent the apron from slipping.

Claim.—First, the endless apron A, when constructed substantially as described, with supports *f*, and connecting blocks *e*.

Second, the arrangement of the large friction rollers B, drum C, and end roller D, in combination with the endless apron A, substantially as and for the purposes specified.

No. 34,560.—JOSEPH BONDY, of New York, N. Y.—*Improvement in Knapsacks.*—Patent dated March 4, 1862.—The device is designed to be attached to knapsacks made with stretchers instead of frames, the object being to draw the knapsack close to the shoulders to prevent its swinging about, and to keep the back part firmly elevated so that the lower end may not press and knock against the back of the wearer.

Claim.—The straps D D, extending from and connecting the rear upper edge of the knapsack to the shoulder straps or strap C, which are fixed to the front side of the knapsack, substantially as and for the purpose specified.

No. 34,561.—W. H. BROWN, of Worcester, Mass.—*Improvement in Breech-loading Fire-arms.*—Patent dated March 4, 1862.—The locking bar is hinged at its rear end to a projection under the barrel, the other end being slotted to receive the bent end of a connecting piece, which rests upon, and is screwed to, an adjusting plate. A screw passes through the locking lever, the connecting and adjusting plates, having a nut on its end, which holds down the front end of the connecting upon the adjusting piece. A packing piece, made adjustable longitudinally, is secured to the stock by a screw, the face of the packing piece against which the end of the locking bar bears, being somewhat inclined, while the end of the locking bar is bevelled in a corresponding manner, so as to form a wedge, by means of which, in connexion with adjusting screws, any desired amount of pressure of the barrel against the breech may be given. The front ends of the plates and locking bar are elevated by the screw and nut, whereby the barrel is forced further back when locked. Hooked projections, rigidly connected to the breech piece, are so arranged that, in loading, the cartridge can be placed in position by a simple downward movement of the hand, the flange of the case passing between the two upper hooked projections until the lower edge of the flange rests on the lower hook.

Claim.—First, the peculiar method of moving the barrel in both directions, and holding it against the breech J, by means of the locking bar D, in combination with the parts E F and G.

Second, the combination and relative arrangement of the inclined or wedge-shaped adjustable packing piece *e*, with the stock and front-bevelled end of the locking bar D, substantially as and for the purpose set forth.

Third, the combination and arrangement of the adjusting piece E with the adjusting screws *s* and *r*, for adjusting the pressure of the barrel against the breech, substantially as set forth.

Fourth, the combination and peculiar arrangement of the connecting piece F, with a locking bar D, and the lever G, as described, whereby it is allowed a longitudinal motion to facilitate the passing of the joint *c* past the plane of the axes *a* and *a*, during the operation of locking and unlocking the barrel.

Fifth, the combination with the stationary breech J, and the recessed rear end of the barrel B, of the projecting hooks *m m m*, constructed and arranged to operate as described, whereby the cartridge case can be placed in position by a simple downward movement of the hand, and there retained in a central position as respects the bore of the barrel, until after the charge has been fired and the barrel unlocked, for the purposes set forth.

No. 34,562.—R. S. CHAPIN, of New York, N. Y.—*Improvement in Lamps.*—Patent dated March 4, 1862.—The wick tube has on one side of the upper end a plate extending up and forming a part of, or attached to the tube, for the purpose of spreading the flame in a thin sheet. The deflector is so arranged as to leave a narrow parallel opening between it and the upper edge of the plate.

Claim.—In combination with the wick tube, constructed as aforesaid, the deflecting cap *e*, applied in the manner and for the purposes specified.

No. 34,563.—W. Z. W. CHAPMAN, of New York, N. Y.—*Improvement in Fastenings for Cartridge Boxes.*—Patent dated March 4, 1862.—The clasp consists of a hinged plate of metal provided with a spring to keep it open or shut, acting like a knife blade. A perforation in the plate fitting over a pin serves to keep the box closed, and a projection on the end of the clasp admits of its being readily opened.

Claim.—The clasp *f*, formed substantially as specified and applied to the lower part of the flap of a cartridge or cap box, and connecting to the bottom of said cartridge or cap box, in the manner set forth, so as to form a fastening that can be worked by the fingers in the act of opening or closing said box, as described and shown.

No. 34,564.—C. W. CLEWLEY, of Providence, R. I.—*Improvement in Watch and Locket Cases.*—Patent dated March 4, 1862.—The rim is formed by first stamping a planchet out of a piece of metal by a punching tool. It is then subjected to the action successively of two sets of dies for one side of the case. The rim for the other side is subjected to a third set of dies after it has been acted on by the first two sets. After the rims are completed, two solid backs are fitted to them, and the two rims are connected by a hinge.

Claim.—A rim for lockets and similar metallic cases formed of sheet metal, in such manner that the face of the field-piece within the case and the exterior surface of the rim are both formed from the same side or surface of the original sheet metal, and that the field-piece and rim are of one piece of metal.

No. 34,565.—F. H. CUYPERS, of Newark, N. J.—*Improvement in Hinges and Hooks.*—Patent dated March 4, 1862.—The part of the hinge entering the wall is slit so as to form two tongues and a centre-piece. Wedges having points to correspond with the openings between the tongues or forks are first placed in the hole made to receive them. A brass or copper casing slit at the lower corners encloses the fork. On being driven in, the forks are made to expand by the wedges. The case also expands, and the hinge is securely held, without the use of screws or other fastening. That portion of the hinge to be inserted in wood is formed with a projecting flange, so as to afford a bearing on both sides of the spike.

Claim.—First, the combination of the wedges B, casing C, and tongues E, constructed and operating as set forth.

Second, the combination of the projecting flange F' with a hinge having tongues expanded or deflected by wedges, as explained.

No. 34,566.—W. H. DOANE, of Chicago, Ill.—*Improvement in Machines for Cutting Veneers.*—Patent dated March 4, 1862.—The concave is constructed mainly of cast-iron, and its fingers or gauge-stops are each cast with a groove or recess in its front face, and said recesses as well as the front faces of the gauge-stops are filled in and covered with a composition of brass and copper, or other non-corrosive metal, in order that the action of the acid from the steamed wood being cut, shall be neutralised, and the fingers or gauge-stops of the concave shall offer but slight friction on the bolt or block of iron.

Claim.—The combination of the cast-iron concave and curved-grooved ribs with the brass faces or other equivalent metal, arranged and connected in the manner and for the purpose specified.

No. 34,567.—G. A. DARNEY, of San José, Cal.—*Improvement in Apparatus for Operating Churns.*—Patent dated March 4, 1862.—A swinging motion being given to the churn, the dasher is made to revolve alternately in opposite directions, by means of a cord acting on the pulley attached to the stem of the dasher.

Claim.—The arrangement of the vibrating frame J, arm *m*, and connecting rod *m'*, in combination with the cord *f*, dasher I *i j*, tub F, and swinging frame E *a b*, constructed and operating in the manner and for the purpose shown and described.

No. 34,568.—ALEXANDER DOUGLAS, of English Neighborhood, N. J., and S. S. SHERWOOD, of Acquackanonck, N. J.—*Improvement in Ladies' Skirts.*—Patent dated March 4, 1862.—The waist-band is strengthened to support it against the destructive effect of the hook, by a piece of thin metal attached by eyelets to the waist-bands, the eyelets at the same time furnishing the necessary holes for the introduction of the hook. The clasps or slides which secure the ends of the hoops are made open or divided and pointed, for the purpose of allowing a more convenient introduction of the hoop and securing a better hold on the web.

Claim.—First, the combination, in the manner described, of the hoops 1 1, tapes 2 2, and braids 3 3.

Second, the combination with the waist-band 8, and with each other, of the metal plate or strap 6 and the eyelets 7 7, substantially as set forth.

Third, the construction of the slides for expanding the skirt, with continuous bars upon the outer side of the hoop, or side furthest from the sliding portion, and with pointed teeth upon the inner side instead of continuous bars, in the manner and for the purpose described, the pointed teeth alternating with the bars, as shown.

Fourth, the combination with the upper continuous hoop of the stay 4, and eyelet 5, substantially as described.

No. 34,569.—DANIEL FITZGERALD, of New York, N. Y.—*Improvement in Tents.*—Patent dated March 4, 1862.—The ribs or framing of the tent are pivoted upon and around the centre-pole, so that the said frame may be conveniently folded upon a vertical axis.

Claim.—First, constructing a tent in the calèche form, so that it may fold compactly together, vertically in a flat form, and be readily erected, substantially as described.

Second, the use of the flanged collars to hold the radial braces, constructed substantially as described.

No. 34,570.—F. B. FRANKLIN, of Appleton, Wis.—*Improved Spring Bed-bottoms.*—Patent dated March 4, 1862.—The bed-bottom is formed of a series of coils and loops. Each loop is formed in the shape of a spiral coil, and provided with an additional loop in each of its ends, making a continuous web throughout.

Claim.—The combination of the coils F F, loops G G′, rods H H′, and eyes E, all constructed, arranged, and connected in the manner shown and explained, so as to constitute a continuous elastic web.

No. 34,571.—W. O. GROVER, of Boston, Mass.—*Improvement in Sewing-Machine Needles.*—Patent dated March 4, 1862.—The blank or ungrooved space should be at that part of the needle at which the point of the shuttle, hook, or other instrument, acting to sieze a loop, enters—the object being to protect the thread, and to prevent its twisting around the needle and forming a loop on the wrong side, so that the point of the interlooping instrument does not enter it.

Claim.—An eye-pointed needle, having an interrupted groove on one side and a continuous groove on the other, substantially such as is described.

No. 34,572.—O. P. HATFIELD, of New York, N. Y.—*Improved Elevator.*—Patent dated March 4, 1862.—The platform is supported upon a frame provided with diagonal braces from front to rear, and moving on vertical guide-posts placed upon one side only of the frame.

Claim.—The construction of an elevator or dumb-waiter, supported wholly upon one side, ascending and descending in a vertical course, substantially in the manner described.

No. 34,573.—W. G. HERMANCE, of Albany, N. Y.—*Improvement in Straw Cutters.*—Patent dated March 4, 1862.—The claim and engraving fully explain this invention—the object being to obtain a strong shear-cut.

Claim.—The combination of the bell-crank, lever G, link E, knife F, and standards or arms C D, cast or secured to the mouthpiece B, substantially as and for the purposes set forth.

No. 34,574.—G. B. HICKS, of Cleveland, Ohio.—*Improvement in Telegraph Apparatus.*—Patent dated March 4, 1862.—The armature of the receiving magnet, instead of being adjusted by a spring pulling the magnet, as is usual, has a movable local magnet placed behind its armature, (the armature being double;) this local magnet being adjusted close to or as near the armature as required, by means of a screw. The armature being double, allows a space between the magnets, so that the magnetism of one cannot influence the other. Conducting wires are attached to the local magnet wires. One of these is connected to a screw by means of a brass plate attached to insulating bars, which plate is thus insulated from the arc *a*; the other is connected to the armature lever underneath the base.

Claim.—First, the employment of an adjustable magnet *m′ m′*, as and for the purpose set forth.

Second, the double armature lever M, with the attached armatures *a*2 *a*3, arranged and operating as specified.

Third, the employment of the local battery number 1 in combination with the helix *n′ n′*, the conducting wires *n′ n′*, and the points *e* and *e*, arranged and operating as and for the purpose described.

Fourth, the employment of two points, one on each end of the sounder armature lever L, by means of which circuit through two magnets on opposite sides of the same armature may be closed or broken simultaneously, and thus the armature lever held still for the purpose described.

Fifth, the combination of the adjustable local magnet *m′ m′* with the receiving and recording instruments, when arranged and operated as and for the purposes specified.

No. 34,575.—J. P. HILLARD, of Fall River, Mass.—*Improved High and Low Water Detecter for Steam Boilers.*—Patent dated March 4, 1862.—The claim describes the nature and object of this invention.

Claim.—The combination of the valve B′ with two ports and detector A′, with one port and adjusting arm J attached to B′ and float F′, constructed and arranged to operate so that when the water falls to a certain line in the boiler the float F′, resting on the water, will open the valve and allow the steam to escape through port D′, to give alarm, and when the water rises to a certain line in the boiler, the float F′ will rise and open the valve and allow the water to escape through port C′ and give alarm, substantially as and for the purposes set forth and described.

No. 34,576.—W. H. HOLBROOKE, of New York, N. Y.—*Improved Silicated Soap.*—Patent dated March 4, 1862.—The nature of this invention is explained by the claim.

Claim.—The combining of a soluble alkaline silicate with rice flour, or an analogous flour, by the process before described or its equivalent, to be used as an ingredient in soap-making.

No. 34,577.—SAMUEL JARDEN, of Baltimore, Md.—*Improved Odorizer of Kerosene Oil.*—Patent dated March 4, 1862.—The oils used for the purpose claimed are oil of lavender, oil of cinnamon, oil of bergamot, oil of lemon, and oil of rosemary, combined in greater or less proportion with kerosene oil, for disguising the disagreeable odor of the latter.

Claim.—The manner of odorising kerosene oil as stated, or by combination with said essential oils in greater or less proportions, if the said manner of odorising be substantially the same.

No. 34,578.—W. H. KELLY, of Onondaga county, N. Y.—*Improvement in Cultivators.*—Patent dated March 4, 1862.—The shares are so attached to the rear of the main centre beam by means of a clasp and nut and screw, as to be readily adjusted forward and backward, and so that their rings may be made to face either side or outwards and inwards.

Claim.—The combination of the central beam, made as described, with the shares 5 and shanks *a*, when constructed and operating as set forth, and attached to the beam by means of clasps and bolts, as shown by figs. 7, 7.

No. 34,579.—BENEDIKT KING, of Providence, R. I.—*Improvement in Cartridges adapted to Breech-loading Fire-arms.*—Patent dated March 4, 1862.—This invention has for its object the connecting of the nipple with the cartridge, and consists in placing at the rear end of the cartridge and in connexion therewith (in a breech-loading fire-arm) a metallic hollow disk with an attached hollow nipple upon which is placed the percussion cap, secured in an appropriate recess by a hinged plate, which forms the resisting breech of the arm.

Claim.—The use and employment of a cartridge having its base formed substantially as described, in combination with the groove V and plate J, when said plate forms a part or one side of the groove or hole V, being constructed and operating substantially as set forth.

No. 34,580.—LEWIS KIRK, of Reading, Pa.—*Improvement in Brick Machines.*—Patent dated March 4, 1862.—The invention is designed for making bricks, preparatory to their being burned or baked, by a machine operating for the purpose, as follows: First, the compression of the clay uniformly throughout its whole mass. Second, the expulsion of the air throughout the whole mass of clay before it is compressed into its ultimate shape. Third, the formation of a solid brick, free from air, and equally compressed throughout the whole mass when moulded along its four larger sides and trimmed at its smaller ends.

Claim.—First, the formation of solid building-brick by compressing the clay in and forcing it out of forming tubes, and by subsequently trimming the ends by the means and substantially in the manner as described.

Second, gradually condensing the particles of clay and expelling the air therefrom by compressing the clay in a separate chamber previous to its being forced in and through the forming tube by the means substantially as described and for the purposes set forth.

Third, in combination with the mechanism described for compressing the clay by forcing it in and through a forming tube, a mechanism constructed, arranged, and operating substantially as set forth, for dividing the compacted mass of clay into bricks of suitable length and for simultaneously trimming both ends.

Fourth, in a brick machine constructed to operate as described by forcing the compressed clay in and through a forming tube, the mechanism for regulating at will the supply of clay into the compression chamber, substantially in the manner and for the purpose set forth.

Fifth, the mode described of dividing transversely the mass of clay compacted into shape by the employment, in combination with the revolving trimming knives or their equivalents, of a fixed and movable platen and tray, constructed to operate as set forth, so as firmly to hold the mass of clay, to constitute a brick, around its longer sides, while it is being cut at its ends.

Sixth, the construction of the hopper with curved grate-bars at the bottom thereof when said bars are provided with projecting teeth, shaped and combined with revolving triturating blades, as described, the whole arranged substantially in the manner to operate as set forth.

No. 34,581.—A. S. LYMAN, of New York, N. Y.—*Improved Process of Separating the Fibres of Wood and other Substances for the Manufacture of Paper Pulp.*—Patent dated March 4, 1862.—The claim and engraving explain the nature and object of this invention.

Claim.—First, effecting the separation of the fibres of wood, hemp, flax, or other vegetable matters, by subjecting them, in a close vessel or vessels, to the combined simultaneous action of a whipping, beating, rubbing, grinding, or picking apparatus, and of water at a high temperature and pressure.

Second, the washing out of the gummy and coloring matters or other soluble parts from the fibres by changing the water while the substances are being subjected to the combined or simultaneous action specified.

No. 34,582.—P. W. MACKENZIE, of Jersey City, N. J., assignor to Addison Smith, of New York, N. Y.—*Improved Gas Compensator.*—Patent dated March 4, 1862.—The compensating plates consist of two or more corrugated (or they may be straight) circular plates of thin metal or any suitable material, (which will allow compensation or yielding to the variations in pressure of the gas,) joined together at the periphery, and having a rod connecting the upper plate with a balance-valve made adjustable by means of a screw-thread cut on the rod, the latter being connected to the valve on one side of its centre, so that if the exhauster is exhausting more gas than is generated, the pressure on the upper plate would be withdrawn, the plate depressed, and the valve opened.

Claim.—The use of the compensating plates A A, the connecting and adjusting rods *g* and *j*, in combination with the valve *f*, and circular valve-seat *d d*, or its equivalent, with long narrow ports *s s*, the whole substantially as set forth.

No. 34,583.—B. F. MCALHATTEN, of New York, N. Y.—*Improved Bed for Ships and Hospitals.*—Patent dated March 4, 1862.—The bed is designed to be used either as a berth on board a ship or as a bed in hospitals, being arranged in such a manner as to form a life-preserving raft in case of danger at sea, or made capable of being heated or cooled when used in hospitals, by the introduction of hot water or ice in the compartments.

Claim.—The construction of a bed with both the end pieces and the bottom pieces forming the bottom laths, made of air-tight chambers, the whole being arranged and combined in the manner and for the purpose substantially as described and specified.

No. 34,584.—J. H. MEARS, of Oshkosh, Wis.—*Improvement in Rakers for Harvesters.*—Patent dated March 4, 1862.—The invention consists in the employment or use of a rake attached to an endless belt or chain, and used in connexion with a guide; the above parts being placed in such relation with the grain platform, and all arranged in such a manner, that the rake will, as the endless belt or chain is moved, traverse or sweep across the platform and take the cut grain therefrom, and return back to its original working point in an elevated state, so as not to interfere during its return movement with the falling of the cut grain on the platform, nor with the bars of the reel which throw the cut grain thereon.

Claim.—Guide X, constructed and operating as set forth, and arranged relatively with guide N, standard 3, bevel wheel S, and double rake P, as and for the purposes set forth.

No. 34,585.—A. D. MILNE, of Tiverton, R. I.—*Improvement in Tobacco Pipes.*—Patent dated March 4, 1862.—The metallic condenser in the pipe-stem is made of iron wire, a straight piece forming the centre, and surrounded by fine gauze presenting cylindrical sections, the warp of which is returned at intervals and secured to the central wire for the purpose of deflecting the smoke and securing the more effective operation of the condenser. The bowl of the pipe is provided with a metal lining, with openings on opposite sides, and resting on a removable partition which is supported on shoulders within the bowl. The stem is provided with a valve for the purpose of modifying the strength of the smoke and increasing the effect of the condenser by the admission of air.

Claim.—First, providing the stem of a tobacco pipe with a removable metallic condenser, substantially as and for the purpose set forth.

Second, providing the bowl with a removable lining, constructed as described, in combination with the removable partition, substantially as and for the purpose set forth.

Third, providing the stem with a valve which may be opened and closed at pleasure, as set forth.

No. 34,586.—JOHN MITTLEHAUS, of Berlin, Prussia.—*Improvement in Setting Artificial Teeth.*—Patent dated March 4, 1862.—The claim and engravings explain the nature and object of this invention.

Claim.—The construction of button-set teeth by combining the following elements: first, a tooth-plate *a*, in proportion to length and breadth, at more or less places perforated by oval openings; second, an edge or rim *b*, surrounding all openings of the tooth plate on the side facing the pituitary membrane; third, a cover *c*, a little larger than the said edge, soldered to the tooth plate at the side turned to the mouth-hole, so as to leave a space between the tooth plate and the cover, substantially as shown and described.

No. 34,587.—ROBERT MORRISON, of Newcastle-upon-Tyne, England.—*Improvement in Apparatus for Forging and Crushing Iron.*—Patented in England, August 6, 1853.—Patent dated March 4, 1862.—The hammer consists of a cylindrical bar of metal on which are formed the piston and guides for the hammer movement. The standards extend above the top of the cylinder, and on the upper end of the hammer is formed a deep T-shaped piece, which being provided with slides on its opposite sides, fitted into corresponding slides in the standards, serve as additional guides for the hammer stroke.

Claim.—First, the system or mode of constructing such apparatus with the piston, piston rod, or hammer bar and guides, in one solid mass.

Second, a hammer bar for steam hammers, constructed substantially as described and arranged, in relation to other parts of the apparatus, so as to dispense with the use of guides below the cylinder.

No. 34,588.—B. W. NICHOLS, of Fair Haven, Conn.—*Coupling for Octaves, &c., in Melodeons.*—Patent dated March 4, 1862.—This invention consists in the use of a series of single diagonal levers to be raised to the position to connect the octave by means of a shaft cam extending the whole length of the reed board, so as to raise all the diagonal levers at the same time and to the same height when it is desirable to couple the octaves. The valves are made of such length and shape that they may be opened equally well by pressing the front end downward with the pitman, or the rear end upward by the adjusting screw in the rear end of the diagonal lever.

Claim.—First, a melodeon valve made with its rear portion so extended and bevelled that it may be opened by pressing the rear end toward the reed board as readily and effectually as by pressing the front end from the reed board, when it is made and fitted for the purpose of coupling octaves, substantially as described.

Second, the use of the shaft cam C, when it is made to serve the double purpose of bringing the diagonal levers into position, and also forming a complete fulcrum on which the whole series of diagonal levers may be vibrated, when made, located, and used substantially as described.

Third, the use of a series of single diagonal levers *c*, in combination with valves *d*, fitted to be worked at both ends, for the purpose of coupling octaves, when the whole is constructed, arranged, and fitted to produce the result, substantially as described.

Fourth, the use of the series of single diagonal levers *c*, in combination with the shaft cam C, when constructed, arranged, and operated substantially as described.

No. 34,589.—L. C. PALMER, of East Winsted, Conn.—*Improvement in Furnaces for Heating Scythes, &c.*—Patent dated March 4, 1862.—A recess is formed at the rear of the fire box, which, in connexion with the ledge extending through the centre of the flue and upon its bottom, allows the work to be brought forward nearly above the coals. The ledge is also designed to separate the flame, &c., in its passage through the flue, so as to insure an equal degree of heat on both sides of the flue. The sides of the furnace are perforated with holes and admit of two sets of workmen using the same fire.

Claim.—The arrangement of the recess G, and ledge *g*, with the fire-box B, flue D, and openings *i*, as and for the purpose shown and described.

No. 34,590.—J. L. PLIMPTON, of New York, N. Y.—*Improvement in Fastenings for Skates.*—Patent dated March 4, 1862.—One end of the connecting link is attached to the sole plate of the skate, and the other is made to fasten at the back of the heel. A suitable stop is placed upon the upper face of the skate plate, against which the heel is clamped and securely held by means of the link and strap.

Claim.—First, the combination of the connecting link D, and sole plate A, with an adjustable or permanent stop, substantially as described.

Second, the connecting link D, lever and catch, or equivalent device, in combination with the stop E, and sole plate A, when combined and arranged to operate substantially as described.

No. 34,591.—H. J. M. PUISTIENNE, of Paris, France.—*Improved Mode of Treating Copper Ores.*—Patent dated March 4, 1862.—The nature of this invention is explained by the claim.

Claim.—The mode set forth of treating copper ores, and particularly the application of sulphur, chloride of calcium or chloride of lime, or other chlorides, for the purposes of the present invention, and it is to be understood that the proportions of the chemical agents mentioned may be varied according to the nature of the copper ores to be operated upon.

No. 34,592.—G. W. PUTNAM, of Smithfield, N. Y.—*Improved Device for Purifying Butter.*—Patent dated March 4, 1862.—This invention consists in separating buttermilk, brine and other liquids or semi-liquids from butter, by subjecting the same to a requisite pressure within a suitable vessel or chamber provided with eduction passages, whereby the particles of butter are made to adhere together, and the foreign fluid substances strained out or separated therefrom.

Claim.—Having the vessel A provided with butter-escape openings *g*, in combination with the adjustable perforated slides *h*, substantially as shown and described for the purpose set forth.

No. 34,593.—T. C. RICHARDS, of Milwaukie, Wis.—*Improvement in Curtain Fixtures.*—Patent dated March 4, 1862.—This invention consists in applying a pressure roller having a milled or corrugated periphery to the pulley of the upper roller. The pressure roller is attached, by means of pendants and a spring, to a bracket screwed to the upper part of the window frame, the object being to prevent the slipping of the cord on the pulley of the upper roller.

Claim.—As a new article of manufacture, a curtain fixture or pressure roller, constructed as and for the purpose set forth.

No. 34,594.—E. P. RUSSELL, of Manlius, N. Y.—*Improvement in Harvesters.*—Patent dated March 4, 1862.—The tapering rollers are placed on the face of the driving shaft, and, running on the bevelled flange of the shaft, cause the latter to revolve and impart motion to the cutters, being designed as an improvement on the flange and rollers working at right angles to each other.

Claim.—The combination of the tapering or conical rollers *a*, with the bevel outward on the flange *c*, operating as described and for the purposes set forth.

No. 34,595.—E. M. SCOTT, of Auburn, N. Y.—*Improvement in Machines for Turning and Mortising Hubs.*—Patent dated March 4, 1862.—This invention consists in combining with an ordinary turning lathe a slide rest provided with a cutter, and also with a mortising tool, so arranged that the cutter may be first made to act against the work and return the hub in proper form, and the mortising tool then made to act upon and mortise the hub.

Claim.—The pivoted bar I, provided with the parallel guides *f f* and sliding heads J N, the heads being provided one with the cutter M, and the other with the chisel O, and augers *j* and the head J, operated by a screw K, and connected with the head N by a bar T when required; all being arranged and combined with a turning lathe, to operate as and for the purpose set forth.

No. 34,596.—C. W. SMALL, of Bangor, Maine.—*Improvement in Projectiles for Rifled Ordnance.*—Patent dated March 4, 1862.—The inner portions of the strips which form the packing, and are partly imbedded in the rear body of the projectile, are arranged radially to the axis of the projectile, but the outer portions are bent over the forward body in such a manner as to overlap each other and form sections of a tube of cylindrical form, covering the rear end of the forward body. The tube is caused to expand by the explosion of the charge.

Claim.—Furnishing a projectile with a packing formed of strips *a b a b*, of flexible metal, partly imbedded in the metal of which the projectile is formed and partly lapping each other on the exterior of the projectile, in such a manner as to form an expanding tube, substantially as and for the purpose specified.

No. 34,597.—C. L. SPENCER, of Providence, R. I.—*Improvement in Mode of Converting Motion.*—Patent dated March 4, 1862.—The upper ends of the connecting rods are curved so as to be capable of spanning the shaft which they are designed to turn, and are connected with a pair of pawls working ratchets or their equivalents in opposite directions, for the purpose of giving motion to the shaft in one direction only. A spring is placed between the two arms in such a manner as to spread the arms apart to prevent liability of hanging on the centre.

Claim.—The use of the spring I, or its equivalent, in combination with the curved connecting rods G G, for the purpose of enabling the operating pawls to be so adjusted as to obtain an effect upon the shaft equal to the action of the crank, while the danger of hanging upon the dead point is prevented, substantially as described.

No. 34,598.—L. L. STEARNS, assignor to Himself and L. M. MEIGS, of Jersey Shore, Pa.—*Improved Washing Machine.*—Patent dated March 4, 1862.—The invention consists in adjusting the pressure upon the clothes to be washed by means of a spring lever, in connexion with the main operating lever, so that a variable degree of pressure proportionate to the thickness of the clothes to be washed is obtained, and the oscillating frame raised by the use of one hand only.

Claim.—The construction of the adjusting lever C, in connexion with the main lever B, and in combination with the spring D, substantially as and for the purpose specified.

No. 34,599.—COLLINS and MUNROE STEVENS, of Boston, Mass.—*Improvement in Clocks.*—Patent dated March 4, 1862.—This invention consists in a combination of devices for the purpose of readily locking and unlocking a Remonton time-piece by the peculiar method of locking the tooth or detent. The whole or nearly the whole pressure caused by the driving weight of the clock is resisted and received upon the pivot or support at or towards the centre of the motion of the tooth or detent, and no force is required for unlocking the wheel, except to overcome the friction at the detent and at the centre of motion of the same, caused by the pressure produced by the driving weight of the clock.

Claim.—The tooth or detent M, turning about a centre pivot or support, as described, in connexion with the lever *m m*, substantially as and for the purposes set forth.

Also, the method of relifting and relocking the lever *m m*, and the tooth or detent M, by the cams *n*, substantially as described.

Also, the combination of the wheel *h*, the wheel *e*, and the shaft *i*, as described, for the purpose of rewinding the spring at the escape wheel, substantially as described.

Also, the socket *v*, protruding through the plate *B'*, in the manner described, in combination with the arm *w*, the pin *y*, and the spring *z*, substantially as described, for the purpose of setting the time part of the clock.

No. 34,600.—W. W. ST. JOHN, of Pleasant Mount, Mo.—*Improvement in Current Water Wheels.*—Patent dated March 4, 1862.—The two pairs of buckets being placed at right angles with each other, are made to operate so that the buckets ceasing to act, partially turns the bucket of the other pair into the water up stream, and the previously active bucket returns up stream edgewise and above the surface of the water. The buckets are set upon an adjustable hub, so as to be adapted to the rise and fall of the water.

Claim.—Fitting the pairs of buckets *g h* and *i k*, when arranged at right angles upon the adjustable block or hub *f* in the manner specified, so that said buckets, by the adjustment of the block, can be so placed as to return above the surface of the water while the buckets in action are immersed as much as possible, as set forth.

No. 34,601.—J. F. TAPLEY, of Springfield, Mass.—*Improvement in Printing and Cutting Paper.*—Patent dated March 4, 1862.—This invention consists in attaching a cutter to a block having a design raised on its surface in such a manner that the operation of cutting and printing may be performed at the same time; the object being to cut out a hole inside of a printed design, as in paper mats for photographs and pages for photographic albums.

Claim.—The combination of the cutter or die B with the block C and springs D D, or their mechanical equivalents, when constructed and operating substantially in the manner and for the purpose fully set forth.

No. 34,602.—ELMER TOWNSEND, of Boston, Mass.—*Improvement in Canister or Case Shot for Ordnance.*—Patent dated March 4, 1862.—The projectile is provided with a winged cap-piece or missile, consisting of a cap having four wings arranged longitudinally and at right angles to each other, so that the missile when discharged shall be impelled forward in a direct line through the air. The wings are kept in place by one or more flanches on the inner surface of the case. The rear part of the shell case A has a bottom cast upon it provided with a projection, to which rear part a wooden sabot is affixed, around which latter a packing of oakum, or equivalent, is wound for the purpose of preventing windage. A fuse projects from the rear end, whereby a direct communication is made between the powder of the main and secondary charges. The rear part of the fuse is formed with a conical point, so as to cut through the paper of the cartridge, which is forced against it by the explosion, and causing the gas to enter holes made in the fuse-tube, fires the combustible material thereof.

Claim.—The arrangement and combination of the wings *h* with the head H, the case A, and the charge of balls thereof, the whole being to operate together, substantially as and for the purpose or purposes as specified.

Also, the combination and arrangement of the part C with the shell case A, the sabot D, and the packing *d*.

Also, the combination and arrangement of the cap G and one or more lateral orifices *f* with the fuse-tube and a chamber *n*, formed in the rear end of the sabot as specified.

Also, the combination of one or more flanches *k k*, or the equivalent therefor, with the loading chamber and the winged head applied thereto.

Also, the construction of the cap *l* and the wings *h*, viz., in two separate parts, substantially in manner and so as to be combined together as described.

No. 34,603.—G. O. TOWNSEND, of Boston, Mass.—*Improvement in Tents.*—Patent dated March 4, 1862.—The pole has a screw fitted upon it at a suitable distance from the lower end, upon which is placed a frame formed by two rings connected by rods. By means of a ring

or hand provided with lugs and operated by a lever, the frame to which the upper part of the tent is connected is raised or lowered, so that the tension of the canvas may be regulated to suit damp or dry weather. Openings are made in the tent covered by canvas flaps, the sides of which are fitted within pockets on each side of the openings, the lower end of the flaps having a toggle fitting in it. By means of cords attached to the toggles the flaps may be opened and closed from the inside of the tent.

Claim.—First, elevating or erecting the tent and graduating the tension of the canvas A thereof by means of a sliding frame D placed on the pole B and operated by means of the screw C on the pole, and the ring or band E and pin *d*, or their equivalents, as set forth.

Second, the combination of the toggles and attached cords *p q* with the flaps *l*, in the manner shown and described.

No. 34,604.—J. R. VAN DEUSEN, of New York, N. Y.—*Improved Car Coupling.*—Patent dated March 4, 1862.—The spiral flanches of the shackle bar are caused, by their peculiar form, to turn on one side as they enter the opening, and resume a pendent position when through the openings by their own gravity, thus rendering the bar self-locking. The circular notches in the back plates are designed as bearings to hold the ends of the shackle bar in a horizontal position when in one drawhead only.

Claim.—The shackle D, provided with the spiral flanches *a a*, in combination with the drawheads A A, having spiral openings C C, arranged relatively with the flanches *a a* of the drawheads, to operate as and for the purpose set forth.

Also, in connexion with the shackle and drawheads A A, the back-plates *b* attached to the frames B, and provided with the recesses or notches *c*, for the purpose of holding or sustaining the shackle, as set forth.

No. 34,605.—GEORGE WESTINGHOUSE, of Schenectady, N. Y.—*Improvement in Grain and Seed Winnowers.*—Patent dated March 4, 1862.—This invention consists in operating the shoe so as to give it an oblique vibratory motion, for the purpose of preventing the straws from catching into the meshes of the screen and passing through it. A box is fitted to the outer end of the shoe, and made adjustable as to inclination, for the purpose of accelerating or checking the discharge from the end of the screen.

Claim.—The arrangement together of the swinging shoe H, when operating as specified, fan C and adjustable box N, as shown and described, for the purpose set forth.

No. 34,606.—C. WHIPPLE, of Providence, R. I., and R. J. STAFFORD, of Smithfield, R. I.—*Improvement in Machines for Combing Cotton.*—Patent dated March 4, 1862.—This invention is designed more particularly for combing cotton, &c., having a short staple. Successive tufts of the material are separated from the stock to be combed, both ends of each tuft combed on each side of the fibre, and the tufts deposited again in overlapping shingles and reunited in a continuous sliver, the noils and waste being made to pass off at a different point of the machine.

Claim.—First, the mode of operation, substantially as specified, by means of which a tuft of cotton or other fibrous material, after it has been detached from the main body of the stock, is transferred to successive holding jaws, and subjected to the operation of being combed alternately on each side and both ends, as set forth.

Second, the combination of a pair of vibrating feed rollers C with a series of jaws B B, having an intermittent rotary motion, substantially as described, for the purpose of separating the stock to be combed into tufts.

Third, giving to each series of jaws an intermittent rotary motion, substantially as described, for the purposes specified.

Fourth, a doffer cylinder H, in combination with the cylinder No. 3, so arranged as to receive the several tufts after they have been combed in successive overlapping layers, preparatory to being formed into a continuous sliver.

No. 34,607.—G. M. ZELL, of Waynesville, Ohio.—*Improvement in Water Elevators.*—Patent dated March 4, 1862.—The bottom of the bucket is provided with a valve, operated by a lever, and a trough. On elevating the bucket its trough is brought over the trough of the curb box and lever tilted, so as to cause more or less water to issue from the bucket as the wheel is turned and the bucket raised.

Claim.—The combination of the wheel or pulley E, spout J, and bucket H, provided with the valve L and lever N, when arranged for joint operation, substantially as and for the purpose set forth.

No. 34,608.—THEODORE ATTENEDER, assignor to Himself and R. H. GRATZ, of Philadelphia, Pa.—*Improvement in Telescopes for Measuring Distances.*—Patent dated March 4, 1862.—The claim and engraving explain the nature and object of this invention.

Claim.—The use in telescopes, spyglasses, &c., of a plain glass disk situated in the focus of the eye lens, a scale being marked on the disk, and that scale so graduated as to enable the observer to ascertain the distance of an object of given dimensions.

No. 34,609.—JEHU BRAINERD, assignor to BRAINERD & BURRIDGE, of Cleveland, Ohio.—*Improvement in Tanning.*—Patent dated March 4, 1862.—This invention consists in a method of preparing the bark and leaves of a certain species of willow known as the Salix Grisea, (of Willd.,) for the purpose of tanning.

Claim.—The use of the Salix Grisea for the purpose of tanning, when prepared as set forth.

No. 34,610.—J. R. GILL, W. E. PALMER, and W. W. WEBB, of Alton, Ill.—*Improved Clothes-Wringer.*—Patent dated March 4, 1862.—The sockets to which the bearings of the roller shafts are attached, are fitted loosely on the metal bars, which latter are provided at one end with pendant jaws, and at the other with a screw and nut, in connexion with an India rubber spring. The inner sockets have jaws on their lower sides. The jaws being placed over the edge of the tub, the turning of the nut serves to graduate the pressure of the rollers, and clamp the device to the tub.

Claim.—The bars A A, provided with the jaws B B, in combination with the jaws M M, sockets G G, roller bearings D H, springs K K, and nuts L, fitted on the bars A A, and all arranged for joint operation, substantially as and for the purpose set forth.

No. 34,611.—W. L. GREGORY, assignor to Himself and GARDNER LANDON, jr., of Amsterdam, N. Y.—*Improvement in Skates.*—Patent dated March 4, 1862.—This invention consists in securing the runner to the stock by means of wood screws attached to the tops of the knees of the runner, forming a dovetailed connexion, in connexion with nuts and sockets.

Claim.—The combination of the screws B' B' with the runner knees, caps D D, nuts C C, and stock A, in the manner shown and described.

No. 34,612.—O. J. HALL, assignor to Himself and FRANKLIN DECKER, of Pittsford, N. Y.—*Improvement in Railroad Chairs.*—Patent dated March 4, 1862.—The claim and engraving explain the nature and object of this invention.

Claim.—Clamping the two halves C and C' of the chair together by means of a single flat tapering key *k*, as specified, when the said halves C and C' are matched together by a tongue and groove running horizontally under the base of the rail, as shown and described, and are provided with stops S.

No. 34,613.—E. M. and J. E. MIX, assignors to W. T. HUNTINGTON and HARVEY PLATTS, of Ithaca, N. Y.—*Improvement in Calendar Clocks.*—Patent dated March 4, 1862.—The day-of-the-month wheel is so constructed that by the use of a properly operated click to move the wheel and detent to stop it, one, two, three, or four teeth, as may be required, may be caused to pass the detent at the expiration of the month, and permit the movement of the index from the position which indicates the number 31, 30, 29, or 28, of the last day of one month, to that which indicates the number 1.

Claim.—The day-of-the-month wheel F, having three of its thirty-one teeth progressively shorter than the remaining twenty-eight, and applied to operate substantially as specified.

No. 34,614.—G. W. RICHARDSON, assignor to Himself and G. M. WEED, of Grayville, Ill.—*Improvement in Harvesters.*—Patent dated March 4, 1862.—The segment is placed upon the side of the draught pole, and has a guide fitted over its edge, so that the finger-bar may be secured at any desired height by means of a pin which passes longitudinally through the segment, and serves for a bearing on the upper edge of the draught pole.

Claim.—The finger-bar D, segment *i*, and plate E, formed of one piece of metal, or of detached pieces connected together and fitted on the axle *a* of the driving wheel A, when said parts are combined or arranged in relation with the draught pole C fitted on the axle *a*, and used in connexion with the pin *j*, or its equivalent, as and for the purpose set forth.

No. 34,615.—ALEXANDER SHANNON, assignor to Himself, T. W. WEATHERED, and E. B. CHERVOY, of New York, N. Y.—*Improvement in Cartridges for Fire-arms.*—Patent dated March 4, 1863.—This invention consists of a sectional cartridge, the powder being divided by perforated diaphragms so as to cause two or more separate and distinct explosions in the piece, the first being designed to overcome the inertia of the ball by a comparatively slow explosion, and the last imparting the greatest momentum possible to the ball.

Claim.—The perforated diaphragm or diaphragms *c d*, producing a sectional charge, as and for the purpose specified.

No. 34,616.—F. W. SMITH, assignor to S. S. WHITE, of Philadelphia, Pa.—*Improvement in Manufacture of Dentists' Pins.*—Patent dated March 4, 1862.—The principal object of this invention is to provide for the manufacture of pins with a head at each end, suitable for artificial teeth, manufactured according to the mode for which letters patent of the United States have been granted to S. S. White, that is to say, with heads at the outer ends of the pins, and it consists in a novel construction of dies for the manufacture of such two-headed pins.

Claim.—The construction of the dies *d e*, and their arrangement relatively to the cutters *e f* and the bunch *h*, substantially as specified.

No. 34,617.—J. A. WELSH, assignor to Himself and R. McC. DAVIDSON, of Xenia, Ohio.—*Improved Cylinder for Grain Scouring and Threshing Machines.*—Patent dated March 4, 1862.—This invention consists in casting the cylinder with a chill at its outer side, whereby a cylinder is obtained which will be kept in constant working order by use; the wear of the soft portion of the cylinder causing the hard outer edges to be kept sharp or prominent.

Claim.—A cylinder A for grain threshing or scouring machines, provided with trilateral-shaped teeth, and having its outer side cast with a chill B, as and for the purpose set forth.

No. 34,618.—N. B. WHITE, assignor to Himself and W. B. RHOADS, of South Dedham, Mass.—*Improved Clothes-Wringer.*—Patent dated March 4, 1862.—The shaft of the upper roll extends through the gear wheel, and fits in a groove in the hub of the corresponding gear, which latter is placed upon a vertical shaft supported by brackets, and is allowed a free upward movement. As the upper roll rises, the two gears are thus kept in connexion. A frame underneath, upon which presses a strong spring, is connected to the head blocks on top of the standards by rods, and serves to keep the rollers in parallel position.

Claim.—First, operating the rolls C and D by gears, one of which is moved vertically by the shaft of the roll, which rises and falls, substantially in the manner specified.

Second, the frame F, or its substantial equivalent, through which the power of the spring *s* is brought to bear on the roll, which rises and falls, for the purpose set forth.

No. 34,619.—J. P. COMLY, of Dayton, Ohio.—*Improvement in Treating Flax and Hemp to make them Resemble Cotton.*—Patent dated March 4, 1862.—The title and claim explain the object and nature of this invention.

Claim.—Cutting flax or hemp straw before it is broken, so as to separate the seed ends from the residue of the stock, and divide the fibre into equal or nearly equal lengths suitable for spinning by ordinary cotton spinning machinery, as and for the purpose specified.

No. 34,620.—C. F. BAXTER, of Boston, Mass.—*Improvement in Filters.*—Patent dated March, 11, 1862.—Upon the main pipe is placed an air chamber, in the lower part of which is a filter. Above the filter is a faucet. When both faucets are closed, water is forced by pressure through and above the filter, condensing the air in the chamber, and the filtered water is drawn off at the upper faucet. On opening the lower faucet, the upper one being closed, the condensed air forces the water down through the filter, and the impurities collected in the filter are carried off through the lower faucet.

Claim.—An air chamber so connected with a filter and filtering medium as to remove the collected impurities of filtration, substantially as described.

No. 34,621.—ALEXANDER BIRKHOLZ, of Hartford, Conn.—*Improved Composition Metal of Iron, Zinc, and Copper* —Patent dated March 11, 1862.—The composition consists of cast iron, charcoal, copper, borax, and zinc, in proportions, which may be varied, the strength of which, the inventor says, is estimated at eight thousand pounds greater to the square inch than wrought iron.

Claim.—The introduction of cast iron into a composition composed of copper and zinc, in about the proportion, substantially in the manner as described.

No. 34,622.—SAMUEL COLAHAN, of Cleveland, Ohio.—*Improvement in Hay Presses.*—Patent dated March 11, 1862.—The pressure is first applied by means of the windlass, the levers being used when a greater compression is required to complete the operation.

Claim.—The special arrangement of the chain or rope M, pulleys L L', sheave O, and windlass P, in combination with the lever R, pawl and ratchet wheel U T, and bottom K, when these parts are arranged and operated as and for the purpose specified.

No. 34,623.—L. O. COLVIN and G. H. GARDNER, of Philadelphia, Pa.—*Improvement in Telegraphing by Light.*—Patent dated March 11, 1862.—The invention consists in so combining a lantern, a shutter to shut off the light thereof, and an electro-magnet, that an operator at any distance from the light may, by opening and closing the circuit in which the magnet is placed, cause the shutter to alternately expose and conceal the light, and so produce the flashes of which the signals are composed; an alphabet being represented by combination of flashes of longer and shorter durations.

Claim.—The combination of a lantern or other illuminating apparatus, a reflector, a shutter, and an electro-magnet, to operate substantially as and for the purpose specified.

No. 34,624.—G. W. COOK and Z. E. B. NASH, of St. Paul, Minnesota.—*Improvement in Pumps.*—Patent dated March 11, 1862.—This invention consists of a submerged pump designed to throw a continuous stream. The swing valve is operated by the warped flange, the latter being bent across its surface in such a manner as to operate like a cam, when revolving with the shaft to which it is secured. An extra pipe is placed on the side of the chamber, and is designed to be used when the centre shaft is made solid.

Claim.—First, the warped flange *a*, in combination with the pipe *f* and cylinder, or water chamber *m*.

Second, the double-acting slide or swing valve *h*, in combination with the flange *a* and chamber *m*.

Third, the extra pipe *g*, in combination with the flange *a* and chamber *m*, the whole being constructed and operated in the manner and for the purpose described.

No. 34,625.—D. A. COURTER, of Beloit, Wis.—*Improvement in Combining a Pistol with a Sword.*—Patent dated March 11, 1862.—The hollow breech sets on the same vertical plane with the sword-blade, by which means it can be incorporated with the guard of the sword-hilt so as nearly to conceal it. The said breech is made longer than the breech-piece, so as to project above and below it, which serves to steady it and hold it in its proper relation to the barrel of the pistol.

Claim.—First, combining with a sword, a pistol with a transverse sliding breech-piece.

Second, the hollow breech extending beyond the breech-piece, for the purpose of holding and guiding the same.

Third, combining the guard of the sword-hilt with the hollow breech.

No. 34,626.—A. B. ELY, of Newton, Mass.—*Improvement in Chain Shot for Ordnance.*—Patent dated March 11, 1862.—The object of this invention is to produce a chain shot suitable for firing from a rifled cannon, and consists of a cylindroconoidal or other convenient form of shot divided into two or more sections, connected in pairs by a chain from one section to the other of a pair, a suitable recess being formed in one or both of the sections to receive the chain when the sections are placed in contact with each other. A band of canvas or other suitable packing is used to hold the sections in place while the shot is loading, and also serves as a packing to protect the grooves of the gun.

Claim.—The projectile constructed in sections held together by bands that are to be ruptured by the explosion of the charge of the gun, and this only when the sections are held by a chain contained within the projectile.

No. 34,627.—O. F. FITCH, of Morristown, Ind.—*Improved Fruit Can.*—Patent dated March 11, 1862.—The clamp is made in two parts, hinged on one side and provided with flanches, which, on being screwed together, secure the stopper and rubber disk together, and to the neck of the can.

Claim.—The clamp E, in combination with the stopper D and India-rubber strip C, in the manner and for the purpose set forth and described.

No. 34,628.—JOHN GAULT, of Boston, Mass.—*Improvement in Chain Shot for Ordnance.*—Patent dated March 11, 1862.—This invention consists of an elongated hollow projectile with two or more movable sections formed by a longitudinal division of its body, connected by a chain or other means, the rear end being fitted with a band, or its equivalent, and the front end with a cap or nut which keeps the said sections together in compact form when inserted in the gun, and during the first part of its flight, and with a cavity or chamber between and within the said sections, to contain a charge of powder and a fuse for the purpose of bursting said band and cap and spreading the sections by its explosion. The fuse may be so regulated as to burst the cap and expand the sections at any desired distance within the range of the gun.

Claim.—First, the combination of the hollow sectional projectile connected with a chain, or its equivalent, enclosed and carried within itself, and the charge regulated by the fuse to extend its sections at any desired point, as set forth.

Second, the securing the sections of the projectile at its front end or point with a cap or nut, or its equivalent, as described and for the purposes set forth.

No. 34,629.—A. F. GRAY, of Belleville, Ill.—*Improvement in Water-Elevators.*—Patent dated March 11, 1862.—The shaft is provided at one end with a plate and arms for the purpose of coiling up a rope when too long for a single coil on the shaft. The chain is made of flat links, and joined to the bail in such a manner as to keep the bucket in a position to have its hooks catch upon the tilting-rod, which has its ends bent and fixed to the front part of the box, and operates to draw forward the bucket. The trough is made to incline to conduct the water off at one side, a metallic plate being secured at the rear of the trough to prevent the water from falling back into the well.

Claim.—The combination and arrangement of the cylinder A with the recoiling plate and arms B *b b*, ratchet wheel and gudgeon G, the flat chain H, the mode of fastening the rope at I, the form of the bail J for the attachment of the chain H, the peculiar shape of the ears or hooks K *k* adapted to the tilting-rod L, and the shape of the tilting-rod, and its mode of attachment at M *m*.

Also, the plate N on the upper edge of the inside wall of the trough, in combination with the bottom of the trough O, inclining to the corner P, and the form of the box using the scale which accompanies the drawings as a guide for its proper construction, the whole being constructed, arranged, and operating substantially as described for the purpose set forth.

No. 34,630.—J. A. GREEN, of Henry, Ill.—*Improvement in Cultivators.*—Patent dated March 11, 1862.—This invention consists in bending the axle of the cultivator so as to pass

over rows of growing corn, and by means of which the cultivator may be raised and lowered at will. A spring catch, in connexion with notches in a semicircular frame, serve to hold the cultivator in position when raised. By means of a lever attached to the front braces, and extending back, the direction of the cultivator shares is regulated.

Claim.—These four features combined in one machine in the manner described: the first feature consisting in the main frame, the bowed and cranked axle, and driver's seat, arranged in respect to each other as described; the second, consisting in the arrangement of the tongue G, the lever H, and the driver's seat J, in relation to each other, as set forth; the third, consisting in making the main frame in two parts, arranging and elevating the driver's seat J and the frame E E L L and N thereon, and the bow of the axle therein, as set forth; the fourth feature consists of the bars O O, the frame E E L L and N, the swivel I, and the main frame, arranged in relation to each other as set forth.

No. 34,631.—L. A. GREEN, of Rocky Hill, Conn.—*Improvement in Line-Holders for Mason Work, &c.*—Patent dated March 11, 1862.—This invention consists in attaching a line to two brackets, which consist of two plates placed at right angles with each other, and fitting on opposite corners of the building. To one of these brackets is attached a frame containing a spool and ratchet. The tension of the line keeps the brackets in place without the use of nails. Pads are placed between the brackets and the wall to prevent the former from slipping.

Claim.—First, the employment of the brackets *b b*, combined with the line *a*, for holding and easily adjusting it (the line) in its proper place.

Second, the pad *s*, brackets *b b*, and line combined as and for the purpose described.

Third, the combination of the ratchet *e*, spool *f*, brackets *b b*, line *a*, substantially as and for the purposes described.

No. 34,632.—W. H. GWYNNE, of Brooklyn, N. Y.—*Improved Apparatus for Making Water Gas.*—Patent dated March 11, 1862.—The distributing box is made of metal, and has a circulating passage within it. It is provided with a finely perforated cover, for the purpose of passing the vapor from the water in a finely divided state upon the incandescent material with which the retort is filled after the distributor is placed therein, and also for delivering the vapor as dry as possible into the gas retort.

Claim.—The distributing box B, with its circulating and heating passage D, and its perforated cover or top C, the whole operating substantially as described and shown, for the purpose set forth.

No. 34,633.—JAMES HARPER, of East Haven, Conn.—*Improvement in Machinery for Making Paper.*—Patent dated March 11, 1862.—This invention relates to certain improvements in what is known as the Fourdrinier machine, the improvements being intended to obviate a difficulty in couching from a wire-cloth by direct contact of an endless felt. The claim and engraving explain the invention.

Claim.—First, the combination with the Fourdrinier wire-cloth apron B and the couching felt G, so arranged as to couch the paper from the wire-cloth by direct contact of the perforated cylinder E, when these parts are so arranged that the cylinders E and H support the wire-cloth B and the couching felt G, respectively, directly opposite their point of contact with each other, substantially as set forth.

Second, the combination with each other, when arranged as described, of the Fourdrinier cloth B, couching felt G, and beater N, substantially as set forth.

No. 34,634.—HENRY HAYWARD, of Chicago, Ill.—*Improvement in Safety Paper.*—Patent dated March 11, 1862.—This invention relates to improvements in paper intended for bank notes and analogous uses, and consists in the employment of continuous lines of fibrous material as a means of designating the denomination or character of a note, coupon, &c., the paper being made in a single sheet, and the threads introduced while in the pulpy state, and worked into and among the fibres of the paper stock, so that they cannot be detached or withdrawn without destroying the paper or surface thereof. The threads or fibrous lines may be of different color or kinds, to designate varieties in the value or character of the sheet. Bright metallic or other particles may also be caused to adhere to the threads, and introduced within the substance of paper, in such condition that they shall permanently change their appearance with any attempt to remove the ink from the sheet.

Claim.—The described means of designating varieties in the value or character of printed sheets of paper, in which threads of fibrous material are incorporated into and among the pulp, as described, to wit: the use of threads of different colors or characters, arranged substantially as specified.

No. 34,635.—J. D. EHLERS, of Baltimore, Md., and J. P. HERRON, of Washington, D. C.—*Improvement in Pantaloons.*—Patent dated March 11, 1862.—The claim and engraving explain the nature and object of this invention.

Claim.—In the construction of pantaloons and drawers, making a fall B on the posterior portion thereof, and securing the same to the waist A of the pantaloons or drawers, substantially as described

No. 34,636.—D. A. HOPKINS, of Brooklyn, N. Y.—*Improvement in Railroad Car Journal Boxes.*—Patent dated March 11, 1862.—A movable plate is made to bear against the diaphragm by means of springs, holding it constantly but with moderate force against the inner surface of the box towards the wheel, permitting the diaphragm to rise with the axle as the friction plate is worn away, whereby dust is excluded from the interior of the box, and the lubricating substance longer retained. The stop-bar, which is used to restrict the end play of the axle, has a groove in that part of it next the end of the axle, and is so arranged with reference to the latter as to move in a direction across its centre, or nearly so, for securing an effectual lubrication of the end of the axle. The friction plate is constructed with a flange at each end, of such a height as to present a sufficient bearing surface for the collars of the axle, until that part of the plate between the flanges is worn through, said plate being used in combination with a seat made separate from the box, so that while they may be separated when removed from the axle and box, they remain attached to each other when in use, without the plate being liable to be so broken before being worn through, as to be unsafe for service.

Claim.—First, the combination of one or more springs with a movable plate bearing against the whole or a part of the diaphragm, substantially as set forth for the purposes stated.

Second, the grooving of the stop-bar, substantially as shown and described for the purpose set forth.

Third, the construction of the friction plate with a flange at each end thereof, in combination with a removable seat or support, when said plate and support are constructed and combined substantially as shown and described for the purposes stated.

No. 34,637.—AMOS KROTZER, of Woodville, Ohio.—*Improved Clothes-Dryer.*—Patent dated March 11, 1862.—The frames, consisting of five parts, are so arranged and connected by hinges as to be expanded in the shape of a square truncated pyramid when in use, the cords being kept strained by means of a spring-catch.

Claim.—The combination and arrangement of the frames *a d*, cord *b*, hinges *c*, and catches *e*, substantially as and for the purpose specified.

No. 34,638.—WILLIAM MENTZELL and ALEXANDER and J. W. GEDDES, of Baltimore, Md.—*Improvement in Lamps.*—Patent dated March 11, 1862.—The claim and engraving explain the nature of this invention.

Claim.—The jacket-tube *a a a a*, as described, in combination with the perforated bottom E E and outside cap F, forming an air chamber for regular draughts of heated air through the perforations of the jacket-tube *c c*, for the supply of oxygen at the point of combustion.

No. 34,639.—C. MESSENGER, of Warren, Ohio.—*Improved Clothes-Wringer.*—Patent dated March 11, 1862.—The standards are secured to a bar at their lower part, the end of one of the standards forming a clutch. To the upper cross piece is secured a screw, which by means of a nut is made to regulate the distance between the rollers. An endless apron is made to pass over the under roller, and another one to convey the clothes away from between the pressure rollers. An adjustable clutch, working in a slot in the lower cross piece, serves to adjust the device to the size of the tub.

Claim.—The special arrangement of the adjustable clutch L, clutch B', springs S, cross bar K, adjusting screw P, in combination with the adjustable endless apron R and rollers G and H, when operating conjointly in the manner and for the purpose set forth.

No. 34,640.—MARTIN MILLER, jr., of Vienna, Empire of Austria.—*Improved Mode of Electro-plating Steel Wire for Piano Strings, and other purposes.*—Patent dated March 11, 1862.—The inventor makes use of a solution of the cyanide of the metal with which the wire is to be covered, and plates with alloys, by using an anode of said alloy and a solution of the cyanide of the metals which compose it. The wire is passed over rollers, one of which is metallic, and is connected with the positive pole of a battery, through a vessel containing the metallic solution and connected with the negative pole; the object being to prevent rust and preserve the original appearance of the wires.

Claim.—The production of steel or other music wire provided with a copper, silver, gold, or other metallic coating, substantially in the manner and for the purposes set forth.

No. 34,641.—HENRY MORSE, of Natick, Mass., and DAN PERRY, of Attleborough, Mass.—*Improvement in Water-Elevators.*—Patent dated March 11, 1862.—The wheel is provided with sprockets to prevent the chain from slipping. It has also a groove, or slit, cut through its rim in the centre, for receiving a portion of each link of the chain and preventing the chain from twisting, and allows the escape of the water and ice from the chain. A tilting hook is pivoted on each side of the covering. The front part of the hook has a projection which catches in the bracket as it rises, when the hook swings forward and strikes the front part of the well cover, causing the bucket to tilt and be emptied.

Claim.—The arrangement and combination of a hoisting chain and a hoisting wheel with openings through its rim for the escape of the water, substantially as described.

Second, the construction and arrangement of the hook K, when hung in the manner and for the purpose substantially as specified.

No. 34,642.—E. S. MURINGER, of Philadelphia, Pa.—*Improved Concentrated Food or Beef Tea.*—Patent dated March 11, 1862.—The beef is prepared by first soaking, then boiling until it is reduced to one-fourth its original quantity. It is then clarified, and when cool, cut in pieces and dried.

Claim.—The concentrated food or beef tea described, when prepared in the manner substantially as specified.

No. 34,643.—JOSEPH NASON, of New York, N. Y., and ROBERT BRIGGS, of Brooklyn, N. Y., assignors to said JOSEPH NASON.—*Improvement in Steam Radiators.*—Patent dated March 11, 1862.—By the introduction of an interior diaphragm or tube extending from the bottom to the top and open at the top, an inward current of steam and an outward current of air are established, and the influent steam made to displace the air.

Claim.—The method substantially as described of constructing the tubes of steam radiators and condensers, with an interior diaphragm or dividing plate, or its equivalent, an interior tube, in combination with a single steam chamber.

No. 34,644.—D. B. NEAL, of Mount Gilead, Ohio.—*Improvement in Evaporating Pans for Saccharine Juices.*—Patent dated March 11, 1862.—The pan is constructed with several apartments, the front ones of which are made of sheet iron, and the last of cast iron, for the purpose of boiling the sirup slowly at a low temperature.

Claim.—The employment of the pan, constructed as described, of combined sheet and cast iron, whereby the sirup may be boiled at a lower temperature, with the same fire, than the juice, as is specified.

No. 34,645.—RESOLVED READ, of Brockport, N. Y.—*Improvement in Machines for Cleaning and Assorting Beans.*—Patent dated March 11, 1862.—The screen is divided into three sections separated by flanges, the meshes of the different screens being of different sizes for separating the dirt and the large and small beans.

Claim.—The combination of the hexagonal screen constructed as described, flanges *s s*, spouts *m n o*, and case D, feed hopper H, spout I, and disk K, when arranged and operating as and for the purpose set forth.

No. 34,646.—N. A. RHOADS, of Waterbury, Vt.—*Improved Clothes-Wringer.*—Patent dated March 11, 1862.—The claim and engraving explain the nature and object of this invention.

Claim.—In a clothes-wringing machine, provided with elastic rollers, the construction of either or both of such rollers, or, in other words, the arrangement of their operating surfaces, so that they may be at a greater distance asunder at their middles than at their ends, the whole being substantially in the manner and for the purpose as described.

Also, the arrangement and combination of the connexion and bearing bar G with the rubber springs *g g*, the shaft H, and its cams *l l*, the whole being applied to the frame A and its rollers D D′, as described.

Also, the application of each of the bars J J with the frame A by means of an adjustable fulcrum screw *i*, whereby the distances of the bar J and the bearing head of the screw from the frame A may be increased or diminished as circumstances may require.

Also, the arrangement of the shaft L and its cams *p p* with reference to the rollers D D′, the frame A, and the two bars J J, or their equivalents, affixed to the said frame.

No. 34,647.—ELISHA ROBBINS, of Milford, Mass.—*Improvement in Picker Motion for Looms.*—Patent dated March 11, 1862.—The foot of the picker staff is fastened to a rocker resting on a rail or support piece. Within the said rocker and support piece is arranged a radial arm, the inner end of which is jointed to or pivoted in the support piece, and the outer end similarly connected with the rocker at its heel. Two projections or guides extend downwards from the middle of the rocker, straddle the arm, and pass into an opening through the support, for the purpose of keeping the radius arm in place, and preventing the rocker arm from being thrown from its supporting rail. At the heel of the rocker is a stop which enters an opening of the support piece for the purpose of preventing the disengagement of the radial arm and its rocker during the rearward motion of the picker staff. The rocker arm is constructed with rounded projections at its opposite ends, to enter respectively two oil cups, arranged one in the support piece and the other in the rocker.

Claim.—My improved arrangement of the radius arm E, its spring F, and the guides *g g* viz., within the support piece D, and the rocker C, whereby they are covered and protected, from dust and accidental displacements or injury.

Also, the arrangement of the heel guide or back stop *i* with the rocker and the support piece.

Also, the arrangement and combination of the oil cups with the rocker, the support piece, and the radius arm, applied to the latter and the rocker.

No. 34,648.—H. C. SHERMAN, of Buffalo, N. Y.—*Improved Condenser for Stills.*—Patent dated March 11, 1862.—A number of zigzag condensing pipes are arranged side by side in sections and parallel to each other; each section opening from a transverse supply pipe at the top and into a transverse pipe at the bottom, so that the alcoholic vapors which enter the supply pipe from the still, will be divided, equal portions passing through each section of the condensing pipe, thus making the condensation quicker and more perfect. The zigzag pipes are connected to the supply pipe at top, and to the discharge pipe at the bottom, by means of flanges so that either section may be removed without materially interfering with the operation of the condenser. A perforated cold water feed pipe is arranged beneath the condensing pipes in such a manner that a jet of cold water will be thrown directly against each section for the purpose of increasing the rapidity and completeness of the alcoholic vapors.

Claim.—First, making the condenser of zigzag condensing pipes, arranged side by side in sections, and parallel to each other, or nearly so, each section opening in and connecting to a transverse supply pipe at the top and a transverse discharge pipe at the bottom, for the purposes and substantially as described.

Second, the combination of the sections B C D with the transverse discharge and supply pipes E and F, each transverse pipe having short pipes *b′*, *c′*, and *d′*, &c., and *b2*, *c2*, *d2*, &c., to admit of an easy connexion and disconnexion of the sections thereto, for the purposes and substantially as set forth.

Third, the combination and arrangement of the perforated cold water feed pipe H with a condenser constructed in sections, substantially as set forth.

No. 34,649.—C. W. SMITH, of New York, N. Y.—*Improvement in Friction Matches.*—Patent dated March 11, 1862.—Paraffine is designed to be used as a substitute for sulphur, beeswax, &c., on the ends of matches, both to communicate the flame to the wood, and protect the igniting material from the action of moisture.

Claim.—The use of paraffine in the manufacture of matches, in the manner and for the purposes described.

No. 34,650.—R. A. SMITH, of Newburyport, Mass.—*Improvement in Fences.*—Patent dated March 11, 1862.—The claim and engraving explain the nature and object of this invention.

Claim.—The mode of constructing each fence section, in order that two or more of them may be arranged and combined as specified, the said mode consisting in making it with two interlocking projections, and with the mortise arranged in each end of it, substantially as specified.

Also, the combination and arrangement of the connecting bar D with two fence sections, when constructed, interlocked, and arranged together, substantially in manner as set forth.

No. 34,651.—J. A. SOUTHMAYD, of Jersey City, N. J.—*Improvement in Vacuum Pans for Evaporating.*—Patent dated March 11, 1862.—The plunger has attached to it a series of plates of wire-netting, which are plunged in and out of the liquid, and expose by this means a larger surface to evaporation. The inner pan is separated from the outer pan, except at the bottom, and the vapor condensing upon the inner surface of the dome of the pan does not run back into the liquid. The inner pan is jacketed to admit of the introduction of steam for heating purposes. The vapor enters a condenser, where, by the introduction of water falling in a finely divided stream, it is condensed and easily pumped out. For the escape of vapor not condensable, a pipe supplied with a valve connects the top of the condenser with the pump cylinder.

Claim.—The plunger or lifter, when constructed and operated in combination with evaporating pans, as specified.

Also, evaporating pans, constructed and arranged in the manner and for the purpose set forth.

Lastly, the condenser and pump, constructed in the manner described, in combination with pans used for evaporating purposes.

No. 34,652.—H. N. STEARNS, of Chardon, Ohio.—*Improvement in Churn Dashers.*—Patent dated March 11, 1862.—By this invention the entire mass of cream is subjected to cutting and frictional action without unnecessary violence and agitation; the design being the rapid production of a large quantity of butter with comparatively little labor.

Claim.—First, a horizontal churn dasher, consisting of a crank shaft F, arms A, metallic wires C, and rods B, all combined and arranged in the manner set forth.

Second, stretching the wires C between the arms A, by soldering the said wires in their metallic plates D, and securing the latter within the arms A, as explained.

No. 34,653.—ZADOCK STREET, of Salem, Ohio.—*Improved Cement and Tile Roofing.*—Patent dated March 11, 1862.—The cement consists essentially of tar and pulverized coke or cinders, to which common salt or alum is added. The cement is first spread upon the roof; upon it the tiles are placed and pressed down, so that cement fills the joints; the whole is covered with a coating of the cement and sand spread upon the surface.

Claim.—A roof composed of a rigid body of any suitable material laid in and covered by cement, compounded substantially as set forth.

No. 34,654.—W. R. THOMAS and MORGAN EMANUEL, jr., of Catasauqua, Pa.—*Improved Blasting Powder.*—Patent dated March 11, 1862.—The claim explains the nature of this invention.

Claim.—The blasting compound made of nitrate of soda, sulphur, ground bark, and chlorate of potash, in the manner substantially as and in about the same proportions set forth.

No. 34,655.—M. and S. G. TAFTS, of Mainville, Ohio.—*Improved Apparatus for Evaporating Sugar Juices.*—Patent dated March 11, 1862.—The heater is fixed and is connected with the pan at the bottom by a gate and adjustable spout. The pans are suspended from the ends of levers, which are transverse to the direction of the flue and oscillate upon pivots, so that the pans can be depressed or elevated. The levers are suspended from a carriage on the upper edge of a beam at right angles to the flue. By means of a gate on one side of each pan near the bottom, the sirup can be drawn from one pan to the other at the proper stage of evaporation. The bottoms of the pans form the top of the flue. By means of adjustable dampers the heat can be shut off from either set of pans at pleasure. The object of this invention is to draw off sirup in the process of evaporation from the sediment without interrupting the process.

Claim.—First, the arrangement and combination of two or more sets of swinging adjustable pans E E′ G G′ with the flue C. heater A. and furnace B, all constructed, operated. and operating substantially in the manner and for the purpose shown and described.

Second, the combination with the pans E E′ G G′ of swinging levers F H and transversely moving carriages *d h*, substantially as and for the purpose specified.

Third, the arrangement of the continuous open flue C and dampers I I′, in combination with the pans E E′ G G′, as and for the purpose set forth.

No. 34,656.—MAURICE VERGNES, of New York, N. Y.—*Improvement in Liquids for Exciting Galvanic Batteries.*—Patent dated March 11, 1862.—The advantages claimed for this fluid over nitric acid are absence of unpleasant odor, less injury to health, greater economy, and the attainment of a more uniform current.

Claim.—The preparation and production of a fluid for use in galvanic batteries, in the place of nitric acid, composed or prepared with a solution of the two salts, bichromate and chlorate of potash, in connexion with peroxide of manganese treated with sulphuric acid, as described, the whole prepared substantially as set forth.

No. 34,657.—RICHARD VOSE, of New York, N. Y.—*Improvement in Car Springs.*—Patent dated March 11, 1862.—This invention is designed to obviate the objections to helical springs of ordinary construction, the violent concussion strains to which they are subjected rendering them soon ineffective.

Claim.—An improved compound spring, produced by interposing a packing of elastic gum, or the equivalent thereof, between the coils of a spiral or a helical metallic spring, substantially in the manner set forth.

No. 34,658.—C. J. WOOLSON, of Cleveland, Ohio.—*Improvement in Cooking Stoves.*—Patent dated March 11, 1862.—The claim and engraving explain the nature and object of this invention.

Claim.—The use of an inside fire door or movable plate, attached by hinges to the inside upper corners of the front door frame of cooking stoves and by catches to the front edge of the horizontal lower fire grate, so as to retain the fuel in its place for the purpose of roasting, and to allow the inside door to be swung outward and upward, that coals may be drawn from the fire for the purpose of broiling.

No. 34,659.—CHARLES WRIGHT, of Newark, N. J.—*Improvement in Tool Posts or Holders.*—Patent dated March 11, 1862.—The hollow base of the tool post has a thread cut upon the inside to receive the thimble which supports the tool. The thimble has a tapering hole through it, and the screw portion is divided lengthwise into four parts to admit of expansion. The lower portion of the tool holder is tapered to correspond with the thimble, so that when drawn upward by the set-screw upon the tool the divided portions of the thimble are forced outward and bind firmly against the hole in the base.

Claim.—A tool post or holder constructed in the manner and for the purpose as specified.

No. 34,660.—GEO. CESSFORD, assignor to JOHN S. and MERRIT PECKHAM, of Utica, N. Y.—*Improvement in Stove Dampers.*—Patent dated March 11, 1862.—A circular register is so connected to an outer movable plate or damper, by means of a metal rod attached to a point near the centre of the damper, as to cause the latter to open and close by the expansion and contraction of the rod without the intervention of levers or equivalents.

Claim.—The combination and arrangement of the register plate A, the damper B, and the expansion rod F, all constructed and operating substantially as described.

No. 34,661.—PATRICK FOY, assignor to Himself and JOHN FITCH, of New York, N. Y.—*Improvement in Apparatus for Boring and Rifling Cannon.*—Patent dated March 11, 1862.—

The apparatus is supported on a bed or frame, upon one end of which is permanently fitted a head block, and at the end nearest the cannon is a movable head block adjustable on the upper surface of the bed, which sustains a cylindrical tool stock receiving the screw that passes through the opposite head block. The screw is rotated and an end movement given the tool stock by any convenient power. The tool stock is formed with a groove on its outer surface inclined to correspond with that desired for the rifle grooves. A ring is held to the surface of the head block by guides, and carries a pin fitting in the spiral groove. This ring is provided with notches around its edge, into one of which a stop engages, by which means successive spirals or grooves are made as the tool stock passes through the cannon, the ring being turned one notch for each successive groove. On the end of the tool stock are placed segmental guiding blocks, with curved surfaces adapted to the inside of the cannon, and so jointed to a diagonal link connected and arranged with a disk and pins working in slots as to be adapted to cannon of greater or less calibre. An auxiliary shaft is used when the cannon is to be bored, the upper pinion being slipped off and placed on said shaft.

Claim.—First, the head block *g*, provided with the adjustable rings 4, pin 6, and stop *g*, together with the frame *c* and driving gearing, in combination with the screw *i* and spirally grooved cutter stock *h*, the whole arranged and acting in the manner and for the purpose substantially as specified.

Second. the guiding segments *s s* and plate *t*, arranged and acting as and for the purposes set forth.

Third, the auxiliary shaft *u*, provided with the gearing *v w*, in combination with the tool or cutter stock *h* and screw *i*, with their respective gears *w l*, substantially as and for the purposes specified.

No. 34,662.—W. T. GRANT, assignor to Himself and J. S. SNYDER, of Jacksonville, Ill.—*Improvement in Machines for Grading and Excavating.*—Patent dated March 11, 1862.—An adjustable lever provided with a pawl extends up between two segmental racks on the main frame, and is so connected with the axle of the forward truck that by moving it forward and back, the depth of penetration of the share may be graduated as desired. The main frame is formed of two longitudinal parts, the back of one being connected to the other by a link rod, and their front ends fitted to a shaft connected with the front truck, by which means the machine is adapted to the irregularities of the surface of the ground.

Claim.—First, the arrangement of the tongue S and truck M with the driver's seat R, and the oscillating adjustable lever P, as shown and described.

Second, the arrangement of the two parts of the main frame *d e* with each other, in the manner shown and described, so as to be separately self-adjusting in respect to the surface of the ground. all as set forth.

No. 34,663.—GUSTAVUS HAMMER, assignor to HOLSTEIN & HAMMER, of Cincinnati, Ohio.—*Improved Machine for Framing Oval Mouldings.*—Patent dated March 11, 1862.—The outer or guiding frame is made more prolate than the oval to be moulded, by which means the eccentricity of the inner frame is accommodated to the fixed cutting tool. A spring keeps the frame in its place, and by means of the sleeves can be raised or depressed. The frame is fed under the cutting tool by means of a ratchet wheel so geared as to move in accordance with it.

Claim.—First, in combination with stops F F and feed wheel E, outer frame H, or its equivalent, surrounding frame I, and having a contour differing from the same, when so adapted to stops F F, and the form of the frame I, as to cause the latter to be fed under cutter head B appropriately thereto, substantially as described.

Second, the arrangement of standard G, brackets *f*, small sleeves *g h*, spring *l*, and lever *n*, substantially as and for the purpose set forth.

No. 34,664.—PHILANDER SHAW, assignor to C. E. HODGES and N. D. SELSER, of Boston, Mass.—*Improvement in Writing Tablets.*—Patent dated March 11, 1862.—The covering preparation is composed of a spirit varnish, alcohol and shellac, mixed with powdered emery for dark or pulverised pumice stone for light colors.

Claim.—A tablet formed of wood compressed to resist the indenting action of pencils or crayons, and covered on one or both surfaces with a preparation having a suitable tooth to receive marks for crayons or pencils. Also such a tablet when formed by compression so as to leave a raised border or frame on and around one or both surfaces of the tablet and integral with it.

No. 34,665.—T. J. YOUNG, assignor to Himself and JOHN ELDER, of Philadelphia, Pa.—*Improvement in Counting Machines.*—Patent dated March 11, 1862.—The object of this invention is to count the strokes of an engine. The strokes of the engine communicate a vibratory motion by means of parallel arms to a pawl, which catches against cogs upon the first numbering wheel and causes it to revolve, and after ten strokes to complete its revolution. The other wheels are caused to revolve proportionally to the revolutions of the first wheel. Upon the edge of each wheel is marked the numbers 1, 2, 3, &c., thus enabling the number of vibrations to be read through the slots in the outer casing. Plates loosely

attached to the rods and the shafts are inserted between the hubs of the numbering and cog wheels, and by pressure of a spiral spring are caused to bear against the hubs with force sufficient to prevent one wheel from communicating its motion to the others.

Claim.—The numbering wheels 1, 2, 3, &c., with their projections and the plates G G, in combination with the cog wheels 7, 8, 9, &c., and the plates I, when the said plates G and I are prevented from turning by the rods H and J, or their equivalents, and when the whole of the plates and wheels are acted on by the spiral springs, or their equivalents, as and for the purpose set forth.

No. 34,666.—RICHARD MONTGOMERY, of New York, N. Y.—*Improvement in Ordnance.*—Patent dated March 11, 1862.—Metal bars or tubes may be inserted into each alternate corrugation for the purpose of additional strength. In case of tubes being used longitudinally they may serve as barrels for small projectiles. The different parts of the cannon requiring more or less strength are provided with more or less sections of corrugated metal. The parts are secured to each other by means of bolts.

Claim.—First, incasing a longitudinally corrugated cylinder with a series of corrugated layers divided transversely in sections, the corrugations of which fit into each other, and run around in the direction of the curves of the arch, as described.

Second, in combination with the outer and inner cylinder thus formed, the use of the hollow tubes or bars *a a a a*, as and for the purposes set forth.

Third, in combination with the outer and inner cylinder thus formed, the mode described of securing the several parts thereof to each other and to the breech of the cannon—that is to say, the bolts *e* and *f*, arranged as set forth.

No. 34,667. ELLEN B. BOYCE, of Greenpoint, N. Y.—*Improved Washing Machine.*—Patent dated March 18, 1862.—The finer and smaller pieces of clothing are placed between the rubber and centre piece, and the larger pieces outside the rubber, so that not only a rubbing action on the clothes is effected, but converging eddies meet in the rubber and cause circulation of the water through the mass.

Claim.—The arrangement as described, and in combination with each other, of the corrugated or ribbed and grooved bottom 1, corrugated or ribbed sides 2, corrugated or ribbed centre piece 3, lever 4, rings 5 5, and rounds or slats 6, as set forth for the purpose specified.

No. 34,668.—R. D. CARY, of Philadelphia, Pa.—*Improvement in Sweeping Machines.*—Patent dated March 18, 1862.—Each broom is attached to a curved handle, one end of which moves upon a pivot on a curved rod extending out from the bolster of the wagon. The outer end is attached to the connecting rod. By this means the forward motion of the wheels communicates to the brooms an oscillating movement. The lugs are at an angle, so that when the connecting rod is at the highest point on the wheel, one end of the broom handle is depressed, and, being arranged as a lever, the broom which is attached to the other end is elevated. The handles of the central brooms are attached to the underside of the handles of the side brooms, and move, therefore, in connexion with them. Scrapers can be substituted for brooms. The sprinkling tube is adjustable, and can be lengthened at pleasure.

Claim.—First, combining and arranging one or more brooms I with the travelling wheels of a wagon or cart, or with intermediate gearing, substantially as described, so as to give a sweeping movement to the brooms, substantially as and for the purpose set forth.

Second, the lugs *i i i i*, or their equivalent, constructed and arranged, in relation to the connecting rods M, substantially as described, for the purpose of raising the brooms in their backward movement, as set forth.

Third, the arrangement of central brooms N with the side brooms I, or in lieu thereof, substantially in the manner and for the purpose set forth.

Fourth, the combination and arrangement of scrapers with a sweeping machine, substantially as described, for the purpose set forth.

Fifth, combining and arranging the sprinkling tube O with a sweeping machine, substantially in the manner described, for the purpose set forth.

No. 34,669.—NATHAN CHAPIN, of East Saginaw, Mich.—*Improved Apparatus for the Manufacture of Salt.*—Patent dated March 18, 1862.—This invention is explained by the claim and engravings.

Claim.—First, submerging a doubly inclining floor in a vat of brine, with its two margins elevated to the surface, separating the brine in two bodies, upper and lower, while the heat therein is connected through the floor, and combining with said floor metallic partitions for transmitting heat direct through said partitions and brine from the more heated to the less heated sections of the vat for rapid equalization of temperature, while the brine is thereby detained to a moderate flow in passing from one end of the vat to the other.

Second, adding to said combination submerged furnaces in both bodies of brine, parallel with each other, for cleaning in the lower while granulating in the upper body, as described.

Third, adding still to this combination perforated covers over a steam chamber connecting said incline plane floor with the salt bins, for draining chlorides from the salt after raking and before dumping into the bins.

Fourth, combining with this entire apparatus opening covers over the building enclosing it for solar assistance in artificial evaporation, as described.

Fifth, placing partitions upon the sides of the submerged furnaces, as described, for preventing the boiling brine thereon from mixing with the main body and interfering with its quiet precipitation of impurities.

No. 34,670.—JAMES COCHRANE, of Harburn, Scotland.—*Improvement in Wet Gas Meters.*—Patent dated March 18, 1862.—If any water is removed from the compartment, the height of water on the measuring chamber remains unchanged, but the float sinks down, and closes the gas inlet by an attached valve. The object is to prevent removal of water through the water-supply pipe.

Claim.—The enclosing of the float of the gas inlet valve in a special chamber or compartment, which is separate and distinct from the main water or measuring chamber of the meter, and the introduction of the lower end of the water-supply pipe into such separate chamber, for the purpose described.

No. 34,671.—A. COLBURN, of Leominster, Mass.—*Improved Mode of Attaching Horses to Vehicles and Detaching them therefrom.*—Patent dated March 18, 1862.—A yielding catch-bar is secured in ferules on the ends of the thills, which latter are attached to the animal by the said catch-bars engaging with correspondingly slotted plates attached, one on each side of the horse. By means of a strap attached to the draw-bar, and passing over the hames to the carriage, the draw-bar is detached from the plate, and the animal released from the carriage when desired.

Claim.—First, the mode described of attaching horses to vehicles by means of the draw bar C, draw-pins D, and double-slotted plates E I J, when combined and arranged to operate as set forth.

Second, the combination of the strap H, rings *f*, draw-bar C, spring *s*, and slotted plates E I J, when arranged to operate in the manner and for the purpose set forth.

No. 34,672.—A. O. CRANE, of Hoboken, N. J.—*Improved Convertible Boat, Bridge, and Tent.*—Patent dated March 18, 1862.—The bottom of the boat is constructed of boards secured to transverse strips. The ends of the boat are secured to the bottom by hinges or joints, so as to be adjustable in an inclined position or spread out lengthwise. The sides of the boat are hinged at the bottom, and consist of two parallel bars connected by uprights and braced by truss bars. Canvas may be placed around the boat, secured by cords. When used for a tent the boat is inverted, and uprights placed at the corners and canvas attached to the sides. The construction admits of the whole being folded in a small compass for transportation.

Claim.—The combination of the uprights or supports E and canvas F with a folding boat A A' *c c*, constructed substantially as and for the purposes explained, either with or without the canvas B.

Also, the adjustable rowlocks C, fitted loosely in the bars *c*, and employed in connexion with buttons D, pivoted to the bars *g*, as and for the purposes set forth.

Also, securing the end pieces *c c* and sides A' of the boat in proper position by means of the sockets *j* at the ends of the sides A, and the cross-bars *i* on the outer parts of the end pieces *c c*, in connexion with the hooks and staples *k l*, substantially as shown and described.

No. 34,673.—W. H. DEVIAR, of Valley Township, Mo.—*Improved Amalgamator for Gold and Silver.*—Patent dated March 18, 1862.—The machine consists of an inclined pump, with a hopper attached to the upper part of the barrel, and connected by a valve, opening and closing with the motion of the piston. The lower part of the barrel is filled with mercury. The hopper contains the precious metal in a finely divided state, mingled with water. At each stroke of the rod the metal passes through an oscillating sieve into the barrel, and is then forced by the plunger through the mercury into a reservoir, where a complete amalgamation is effected by the action of a pair of revolving beaters.

Claim.—Forcing the pulp containing the precious metal up through the column of mercury, substantially in the manner described, for the purpose specified.

No. 34,674.—WILLIAM EBBITT, of New York, N. Y.—*Improvement in Boxes for Car Axles.*—Patent dated March 18, 1862.—The bearing is chilled at its ends and bearing surface, so as to render it less liable to wear than the usual composition, the object being to prevent the increase of end-play, and consequent concussion thereby.

Claim.—The employment of the chilled iron bearing *f*, for the axle *a*, fitted and acting substantially as and for the purpose specified.

Also, the metallic collar 2, permanently formed on or attached to the axle *a*, when enclosed within the chamber *e*, that has an opening at the bottom, said collar forming a centrifugal dust and dirt excluder, as and for the purposes set forth.

No. 34,675.—E. EDWARDS and JOEL COWEE, jr., of Keene, N. H.—*Improvement in Machines for Cutting Chair-backs.*—Patent dated March 18, 1862.—The pieces to be cut are placed in

a series of beds or seats formed in the periphery of a cylindrical revolving table, which carries them forward to the cutting tools arranged on each side of the table, so as to shape both edges of the chair-back at the same time. The cutting tools are made similar to a circular saw, with the addition of blades projecting from the side of the saw-plate sufficiently to cut away the surplus material in advance of the saw. The tools are mounted in oscillating frames, and are operated to and from the work by a series of patterns attached to and carried by the table.

Claim.—The combination and arrangement of the oscillating cutting tools B B, the revolving table A, and patterns C C, operating substantially as and for the purposes set forth.

No. 34,676.—THADDEUS FAIRBANKS, of St. Johnsbury, Vt.—*Improvement in Platform Scales.*—Patent dated March 18, 1862.—The scale is so constructed as to admit of its parts being folded together into a small bulk, to facilitate transportation. The upright pillar folds down upon the platform, and is held in that position by a lug and ear, and also by a loop, which slips over the end of a screw upon the top of the pillar. The beam and attachment, without any separation except the removal of the large poise, folds into the pillar like the blade of a knife, and is fastened by a double-acting bolt extending lengthwise along the top of the beam cap, that it may be firmly held, and also protected against theft. The poise fits into a socket in the platform, and, to avoid misplacement, the cover is confined by a chain. The steel gate is hinged, to admit of the folding of the upright.

Claim.—First, securing the pillar B to the base, and supporting it in both the upright and horizontal positions, by means of the lugs D E and ears *a*, or their equivalents, substantially in the manner described.

Second, the employment of the dog F, in combination with the folding pillar B, for the purpose of readily securing and releasing the latter when in the upright position.

Third, folding the beam K and its attachments against or within the pillar B, substantially as and for the purpose set forth.

Fourth, the double-acting cap bolt N, in combination with the folding cap H and pillar B, for fastening the said cap H, in both the folded and extended positions, by the same bolt, substantially as specified.

Fifth, the combination of the loop or handle *g* and screw G, for tightly confining the pillar B to the base when in the folded condition, substantially as shown.

Sixth, stowing and confining the poise W within a pocket or recess P in the platform, substantially as and for the purpose set forth.

No. 34,677.—JOSEPH FIRMENICH, of Buffalo, N. Y.—*Improvement in Dermopathic Instruments.*—Patent dated March 18, 1862.—This instrument is designed for the treatment of disease by acting upon the skin. Its construction and operation will be evident from the engraving.

Claim.—A dermopathic instrument constructed substantially as described, having a cylinder or cup which contains the puncturing needles, and a medicinal preparation in contact with the needles, so that the skin of the patient may be punctured and the medicine infused at one operation of the instrument, as set forth.

No. 34,678.—J. E. FISK, of Salem, Mass.—*Improvement in Dry Gas Meters.*—Patent dated March 18, 1862.—The vibrating rods extend up from the centre of the diaphragm pistons through the partition D, just above which each rod is hung by means of horizontal journals in a thimble socket, so as to vibrate vertically. Each of the joints thus formed is enclosed in a flexible sleeve of a taper tubular form. The rods are connected at their upper ends by means of horizontal arms, which, in connexion with a crank shaft that actuates the gas valve, transmit the motion of the flexible portion of the diaphragms to the registering gear by means of a worm and screw wheel. The gas chest has a permanently fitted top, and from its base project ears resting upon extensions of the valve seat and fastened thereto by screws, thus rendering it easily detachable. The lower end of each rod terminates in a cross, and attaches above the cross directly to the upper shield of the diaphragm and indirectly at the extremities of the cross, through horizontal links, to the other three shields.

Claim.—First, the vertically vibrating rod or rods I, in combination with the diaphragm or diaphragms of a gas meter, for the purpose set forth.

Second, the detachable gas valve chest D1, constructed as described, in combination with the diaphragm chambers and the gearing chamber, for the purpose set forth.

Third, the combination with a valve M, operated substantially as described, of the vibrating rods I of the diaphragms, and the connecting arms K of the crank shaft L, for the purpose set forth.

Fourth, the flexible sleeves J, substantially as and for the purpose set forth.

Fifth, attaching the diaphragm C to the vertically vibrating rod I, by means of the cross *c*, on the end of the rod, and the connecting links *c c c c*, in the manner and for the purpose described.

Sixth, the thimble socket *g*, and rocking journals *f*, of the vibrating rod, for supporting the diaphragms and allowing the rod to vibrate, substantially as described.

No. 34,679.—W. A. FOSTER, of Fitchburg, Mass.—*Improvement in the Means of Operating Cut-off Valves.*—Patent dated March 18, 1862.—The link has a double rocking motion given to it by the two eccentrics, and is designed to be used instead of the sword arm, (which is vibrated by a single eccentric on one of the shafts,) and may be so adjusted by setting the two eccentrics that the required motion may be imparted from it to the cut-off.

Claim.—Operating the cut-off valve by the link F, which operates the main valve, substantially in the manner specified.

No. 34,680.—MICHAEL GALVIN, of Scranton, Pa.—*Improvement in Hand Tenoning Machines.*—Patent dated March 18, 1862.—The box which holds the wood, upon which the tenon is to be cut, is open at both ends and top, having side pieces projecting in front, upon which is secured a cap, by which an up and down motion of the wood is prevented. A graduated sliding scale is fitted in the bed piece at one side of the box and secured in position by a thumb screw under the box. In the sliding rule is secured a stop, against which the wood to be tenoned is placed and adjusted by the scale to the length of tenon required.

Claim.—The combination of the sliding scale H, stop I, thumb screw J, with the box A, cap C, and clamping screws D E, when arranged and operating in the manner and for the purposes described.

No. 34,681.—DANIEL GILBERT, of Middlefield, N. Y.—*Improvement in Wheel Vehicles.*—Patent dated March 18, 1862.—The axles are suspended from the bolsters of the vehicle, and bear against friction rollers. The wheels are loosely attached to the axles, so as to have an independent motion.

Claim.—The rotating axles H M, with the friction roller bearings F F G G, in combination with the wheels O, placed loosely on the arms *a* of the axles, as and for the purpose set forth.

No. 34,682.—B. D. GODFREY, of Milford, Mass.—*Improvement in India-rubber Boots and Shoes.*—Patent dated March 18, 1862.—The claim and engravings explain the nature of this invention.

Claim.—A double India-rubber sole for boots and shoes, the two portions being each vulcanized in a mould, and so formed that their surfaces of contact shall be exactly adapted the one to the other, and will adhere to each other when the cement is applied, without being held pressed together for the purpose specified.

No. 34,683.—EARL GUYER, of Wolcott, Vt.—*Improvement in Stoves.*—Patent dated March 18, 1862.—The claim and engravings explain the nature of this invention.

Claim.—First, an auxiliary stove with hollow non-conducting walls, made in two parts and with hinged side and top doors, and with a passage for a draught flue for use in connexion with an ordinary cook stove in the manner described.

Second, in a non-conducting auxiliary stove, which is capable of being wholly removed from an ordinary cook stove after having been made to envelop the same for a season, the combination of the front stationary fender portion U, and the top and side hinged portions B D D, whereby the top of the stove can be exposed at top and sides, and the cook at the same time shielded from the intense heat, as described.

No. 34,684.—EARL GUYER, of Wolcott, Vt.—*Improvement in Saw-Mills.*—Patent dated March 18, 1862.—The inclined rails are hinged at one end to bars having transverse shoes attached to their respective ends, and grooved underneath to fit over slides. The other ends of the rails are supported on the bars by means of an arm and set screw, the arm playing freely in a slot of the bar. On the under side of the flooring are arranged elbow levers connected with the bars of the inclined rails by vertical pins. The levers are connected with each other by a longitudinal rod which fits in a socket of the rod at one end, the other end passing up at a right angle through the flooring. By means of a lever pawl, in connexion with a trip and attachments, each end of the log to be sawed is moved on the carriage at right angles to its motion, and the inclined rails adjusted out of the way to admit of the gigging back of the carriage. The head block may be independent of the tail block in its motion, so that the two rails are moved in and out at proper intervals by the carriage traversing back and forth, and the automatic operation continues until the log is sawed up.

Claim.—The combination of the inclined rails I I′, lever arrangement L L M N, and attachments *m n r* Q R of the carriage E, substantially as and for the purposes set forth.

No. 34,685.—JOHN M. HATHAWAY, of New York, N. Y.—*Improvement in Explosive Shells for Ordnance.*—Patent dated March 18, 1862.—The diverging barrels are inserted in the body of the shell, and contain powder and bullets to be discharged either previous to the explosion of the shell or simultaneously. The concussion fuse of the shell is connected with the powder in the barrels. The lead ring near the point of the shell will be forced downwards when the bomb starts, and thus fill up the grooves in the cannon, and prevent windage. The circular groove on the shell prevents the ring from being pushed down too far. The elastic base and corrugated metal attached are also designed to prevent windage. The base revolves on the pin *f*, and the length of the fuse passing through and along a circular groove in the base can

thus be regulated. The explosion of the powder expands the conical ring and the divided washer from the pin, by which means the base of the shell is detached. The tapering sheet metal spring sustaining the detonating plug, will receive a slight blow which otherwise might explode the shell, but on a heavier blow the springs allow the plug to strike the detonating powder.

Claim.—First, the arrangement of the diverging barrels *g g*, connected together at their base by the circular groove 8, surrounding the chamber *h*, and fired in the manner specified.

Second, the lead ring *c*, provided with a corrugated sheet metal band, in combination with the circular and longitudinal grooves 4 at the tapering end of the bomb, as and for the purposes set forth.

Third, the elastic base *b*, in combination with the tapering corrugated metal *d*, in the manner and for the purposes specified.

Fourth, the disk *e*, through which the fuse *i* passes, when fitted as set forth, to regulate the length of said fuse, as specified.

Fifth, in combination with the base *b*, and disk *e*, the pin *f*, divided washer 6, and conical ring 7, for the purpose set forth.

Sixth, the tapering sheet-metal spring *l*, constructed as specified and applied to sustain the detonating plug *k*, as set forth.

Seventh, the rollers 2 2, arranged and applied as shown, to take the rifling grooves, for the purposes specified.

No. 34,686.—T. A. HAVEMEYER and HENRY SCHNITZSPAN, of New York, N. Y.—*Improved Carriage for Sugar Moulds.*—Patent dated March 18, 1862.—The adjustable plates are supported by posts fixed on the lower frame, and are provided respectively with curved arms, reversed on the upper and lower plates. By means of rods projecting from the posts, passing through slots made in the plates and secured by nuts, the curved arms are adjusted to receive moulds of different sizes. Conical recesses are made in the lower frame to receive the tips of the moulds. A caster-wheel is placed on the front part of the frame, which is bent so as to form a recess to admit of a large-sized wheel—the arbor being fitted in a hollow post, which supports the front part of the plates.

Claim.—First, the adjustable plates G H, provided with arms *f f'*, and arranged or applied to the carriage, substantially as and for the purpose set forth.

Second, in combination with the adjustable plates G H the frame A, provided with recesses *k* to receive the tips *l* of the moulds, as specified.

Third, providing the frame A with a recess *e* at its front part or end, as shown, when said recess is used in connexion with a hollow post E to receive the arbor *c* of the caster-wheel C, and said post is attached to frame A, to support the front ends of the plates G H, as set forth.

Fourth, the combination, construction, and arrangement of the parts shown and described, to operate as and for the purpose specified.

No. 34,687.—M. L. HORTON, of Claremont, N. H.—*Improved Mop-Head.*—Patent dated March 18, 1862.—The mop-holder is made adjustable by means of a ratchet arm attached to its end, and sliding into a socket in the mop-handle. A dog attached at one end of a spiral spring holds the ratchet arm firmly in position. The bent ends of the mop-holder slide in grooves on the extremities of a cross-piece upon the handle.

Claim.—The combination of the parts A and C, and adjusting them, or firmly holding them in any required position, by means of the ratchet arm B, dog E, and spring *d*, operating as described and for the purposes set forth.

No, 34,688.—J. J. JOHNSON, of Kalamazoo county, Mich.—*Improved Tanning Process.*—Patent dated March 18, 1862.—This invention is explained by the claim.

Claim.—The employment of the liquor, compounded of fermented bran, water, common salt, and sulphuric acid, substantially in the proportions and manner specified, and its combination with the solution of lime and wood-ashes in water, and with the stuffing of fish-oil, alcohol, flour, paste, and tallow, substantially in the proportions and manner set forth.

No. 34,689.—C. MEYER, of New Brunswick, N. J.—*Improvement in Boots and Shoes.*—Patent dated March 18, 1862.—This invention is designed more particularly for fishermen or boatmen, who have occasion to use the foot in belaying a rope, as, when run out from a windlass in casting a seine or drawing it in, the foot is made to retard or guide its movements.

Claim.—So extending the width of the shank of a boot or shoe sole that when applied to a boot or shoe said sole shall form a lateral wearing protection on the back side of the boot or shoe, in the manner and for the purpose set forth.

No. 34,690.—J. MILHOLLAND and J. J. LAHAYE, of Reading, Pa.—*Improvement in Journal Boxes.*—Patent dated March 18, 1862.—Between the back of the box and a plate I is placed a cork packing, fitting upon the enlargement of the axle. The top of the cork is severed so that one end overlaps the other, the portions being kept in contact by a metal clip, and the edges are surrounded by a metal strap connected at its ends by a spiral spring, thus forming a tight joint around the axle, and preventing the escape of oil and penetration of dirt. The

front end of the box is made to bear against cork blocks placed in recesses near the edges in the cover so as to prevent oil from escaping at the joints. On the lower end of the cover is a hollow projection communicating with the interior of the box, the upper edge of the projection being sufficiently high to receive only the proper quantity of oil necessary for the proper lubrication of the journal, so that no more can be introduced. Upon the projection is placed a hinged lid, which is kept closed by a strong spiral spring. The lid is recessed for the reception of a cork packing to bear upon the top of the projection, and is also provided with a socket for the insertion of a bar to raise it. The upper plate L of the lubricator is curved, the wick on the plate being kept by the action of the spring in contact with the axle, and the ends of this plate are provided with ribs to take the pressure of the springs against the axle, so as to prevent the wicking from being rapidly worn away.

Claim.—First, the cork packing J and the detachable plate I, when both are arranged in the rear of the box and confined therein by the recess *t* and key D, as and for the purpose set forth.

Second, the cork packing J severed at one point, in combination with the strap *s* and spring *p*, the whole being constructed and arranged substantially as and for the purpose specified.

Third, the cover E, having a recess *f* filled with cork and applied to the front of the box, in the manner and for the purpose specified.

Fourth, the hollow projection G, the lid H, with its dovetailed recess, containing the cork packing *k*, the spring for depressing the lid, the socket *l*, or its equivalent, the whole being arranged and combined with the detachable cover E, as and for the purpose set forth.

Fifth, the projections *o v*, applied to the plate L, substantially in the manner and for the purpose specified.

No. 34,691.—RICHARD MOHLER, of Lancaster, Pa.—*Improvement in Smut Machines.*—Patent dated March 18, 1862.—This invention is designed as an improvement upon a machine patented to said Mohler on July 24, 1860. The branch arch may be attached to the side of the main tube at any convenient point. The mouth of the arch fits over the scourer, and grain is fed into the hopper, a suction blast being made to draw up the screenings, &c.

Claim.—The branch arch K, with its tube L, hopper V, and connecting link *k*, when combined with the main arch and its chambers, as specified, for the purpose and in the manner set forth.

No. 34,692.—W. P. PARROTT, of Boston, Mass.—*Improvement in Method of Laying Stone, &c., under Water.*—Patent dated March 18, 1862.—A framework of piles is erected above the place where the masonry is to be laid, and guiding lines are marked upon it. The stones are fitted to each other on shore, and the place each is to occupy determined, and the stone numbered accordingly. When the stone work is built under water each stone can be lowered to its proper place, which is determined by the lines upon the frame. Two or more guide rods falling into holes made on the outer surface of the stones, and projecting above the water, enable the engineer to see that each stone is placed accurately. A level and plummet projecting above the surface of the water indicates the proper level of the stone.

Claim.—The method, substantially as described, of laying stone wall or masonry under water.

No. 34,693.—T. F. REILLY, of New York, N. Y.—*Improvement in Rotating Projectile for Smooth-bored Ordnance.*—Patent dated March 18, 1862.—In the base of the bore of the gun a breech-piece is adapted to be firmly held so that it cannot be rotated, its rear end being provided with two projections fitted into recesses in the gun, and its front part being forked to correspond with the rear of the projectile, one side of each projection being straight and the opposite side twisted or forming uniform spiral inclined planes. Between the plane faces of the projections are two sectoral spaces which receive the powder, placed in bags or cartridges of proper form. On the explosion of the two quantities of powder, a spinning or twisting motion is imparted to the projectile. The cannon is supplied with two touch-holes leading one to each space containing the cartridge, so that both charges shall be fired at the same time.

Claim.—First, so forming and arranging the projectile, the explosive material, and the interior of the gun, that the explosion shall act directly upon the shot, in such manner as to give it a rifle motion, substantially as set forth.

Second, controlling the twisting or rifle motion of a projectile, rotated within a smooth-bored gun, as described, by means of surfaces *b b c c*, arranged to act upon each other in the manner and with the effect set forth.

Third, forming the parts B' B', or equivalent, abutments at the base of the bore of the gun upon a piece B, separate from the gun, for the purpose set forth.

No. 34,694.—JOSEPH ROHMER, of Chicago, Ill.—*Improvement in Grain Winnowers.*—Patent dated March 18, 1862.—The adjustable partition is hinged between the two forward frame posts, and can be so arranged as to regulate, in connexion with the fan, the mixture of the grain with the chaff. An adjustable bottom is hinged to the hopper to regulate the

amount of grain to be fed. An adjustable spring is placed on the back of the rear frame post, and, in connexion with a shaft, ratchet wheel, and cord, serves to regulate the degree of vibration of the sieve frame.

Claim.—First, the arrangement of the adjustable partition L, sieves *g g'*, and fan D, constructed and operated as and for the purpose set forth.

Second, the arrangement of the adjustable trap bottom B, connected with the sieve frame *i*, the arm *r*, strap *l'*, and adjustable spring *z*, as and for the purpose set forth.

No. 34,695.—F. M. RUSCHHAUPT, of New York, N. Y.—*Improved Apparatus for Preventing Malt Liquors from becoming Flat.*—Patent dated March 18, 1862.—The invention consists of a vessel divided into two compartments, one of which contains diluted acid; a small perforated cylinder containing a carbonate, dips into the acid, and by means of an attached rod projecting out of the cover of the vessel can be raised or lowered, so that the gas can be produced at pleasure. The gas passes into the compartment through a tube, and is washed by the water contained in it, thence passes into the beer, which it is desired to impregnate.

Claim.—The improved arrangement for the application of carbonic acid gas, in the manner described and for the purpose set forth.

No. 34,696.—T. H. RUSSELL, of Northfield, Vt.—*Improvement in Water-Wheels.*—Patent dated March 18, 1862.—The lower end of the hub of the wheel is made to fit upon a semisphere placed centrally at the base of the framing; on the lower part of the semisphere is secured the ring G, the lower edge of which is formed of inclined surfaces resting on corresponding surfaces on the base of the framing. The ring has a toothed segment into which gears a pinion on the end of a vertical shaft J, by which means the shaft and wheel may be adjusted vertically to admit of the equal wear of the gearing. The upper part of the chutes are of curved form, and the lower parts inclined so as to direct the water at right angles to the upper parts of the buckets, while the curved upper parts receive the water vertically through the orifices of the gate and direct it to the lower parts of the chute with the least possible friction. The chute case has recesses in it so as to form two concentric annular projections with radial ribs between, forming a bearing surface for the gate. The annular gate L has three horizontal cleats over the curved ways resting on vertical screws; between the cleats and ways are friction rollers to ease the bearing of the gate on the chute case, so that the gate may be turned and adjusted with ease, and raised when necessary for cleaning.

Claim.—First, the socket *h'*, semisphere *i*, ring G, provided with the inclined surfaces *j*, and frame F, provided with the inclined surfaces *k*, in combination with the toothed segment H and pinion I, all arranged as shown, for the purpose of raising and lowering the wheel D and shaft E, as set forth.

Second, the packing C, when applied to the wheel by means of the shoulder *s*, of the flanch *b*, of the case A, and the adjustable flanch B, connected to and arranged with flanch *b*, as shown, for the purpose of expanding the packing and fitting it snugly and water-tight around the wheel, as described.

Third, the chutes K, when constructed as shown and arranged relatively with the buckets *h* of the wheel D, to operate as and for the purpose specified.

Fourth, the arrangement with chute cases M of the recesses O, concentric projections *p p*, and radial projections *q*, as and for the purpose set forth.

Fifth, the strips or cleats O, attached to the annular gate L, in combination with the adjustable ways P and friction rollers *c'*, substantially as and for the purposes set forth.

No. 34,697.—GELSTON SANFORD, of New York, N. Y.—*Improvement in Machinery for Breaking and Dressing Flax or Hemp.*—Patent dated March 18, 1862.—On the main shaft are secured two heads which receive near their periphery, the journals of a series of fluted rollers, between which are hatchel bars secured to the heads; surrounding the series of fluted rollers, and secured to the frame, is a ring with cogs on its inner periphery, into which the flutes of the rollers mash like cogs, thus causing a rotary motion on their axes while they revolve about the axis of the main shaft, so that their fluted peripheries may properly act in connexion with the fluted surface of a sector concave placed above, which latter is hinged at its rear end to the frame, the front end being suspended by a spring which lifts it clear of the track of the fluted roller, when not drawn down by a treadle. The yielding of the concave prevents the violent breaking action which is injurious to the fibres.

Claim.—The fluted roller or rollers having a positive planet motion, substantially as described, in combination with a yielding fluted concave, substantially as and for the purpose described.

Also, the hatchel, in combination with the fluted roller or rollers, having a positive planet motion, and the yielding fluted concave, substantially as and for the purpose specified.

No. 34,698.—GELSTON SANFORD and J. E. MALLORY, of New York, N. Y.—*Improvemen in Machinery for Breaking and Cleaning Hemp or Flax.*—Patent dated March 18, 1862.—The ends of the fluted bars are fitted to slide in ways in the sides of the frame, the upper bar being connected with a double crank on the main shaft for giving it a rapid motion; the lower bar rests on springs so as to yield to the concussion caused by the upper bar; the springs rest upon a movable bed, the ends of which also slide in ways, and the bed is hinged to one end of a pair of toggle joint levers, the lower ends of which are hinged to the bottom of the frame; the toggle levers are operated by means of a treadle, which causes the lower bar to be carried up to the position for breaking, and when the bar is brought down, the attendant is enabled to pass his hand between the bars, so as to feed the broken flax to the scutching operation beyond.

Claim.—Combining the fluted bars, substantially as described, for performing the compound operation of breaking and pounding flax or other like plants, with springs, substantially as described, to render such compound breaking and pounding surfaces yielding and self-adapting, substantially as and for the purpose specified.

Also, in combination with the fluted breaking bar, reciprocating by a positive motion, the making of the other or opposite breaking bar movable, and connected with the frame by toggle joint levers and treadles, or their equivalents, substantially as and for the purpose specified.

No. 34,699.—C. B. SAWYER, of Fitchburg, Mass.—*Improvement in Hot-air Furnaces.*—Patent dated March 18, 1862.—The water vessel is applied around the pipe, in which are a series of openings just above the surface of the water, so as to allow the heated air to come in contact with it; the air, when dry, thus absorbs moisture, and the injurious effects of dry heated air are obviated.

Claim.—First, the employment or use, for the purpose specified, of a water chamber B, when applied substantially as described, either to the cold-air induction pipe or to the hot-air pipe A, of an air-heating furnace, at a point sufficiently remote from the furnace to prevent the water reaching the boiling point, as set forth.

Second, the employment or use of a sponge C, or other suitable material, placed in the cold-air induction pipe, or in the hot-air pipe A, of an air-heating furnace, to serve as a separator to free the hot air, or air to be heated, from dust and other light impurities which may be held in suspension in it, substantially as described.

No. 34,700.—G. W. SCOLLAY, of St. Louis, Mo.—*Improvement in Burial Cases.*—Patent dated March 18, 1862.—The claim and engraving explain the nature of this invention.

Claim.—First, the continuous grooves *b* in the joints of the coffin, for the purpose of cementing them and making them air-tight, in the manner described and for the purpose specified.

Second, combining a valve with a deodorising chamber made in the coffin, for the purpose of deodorising the escaping gas, as described.

Third, the chamber *c*, in combination with the coffin, and with or without the valve *r*, and partition *d*, for the purpose of holding the deodorizing material.

No. 34,701.—NOAH SHAW, W. B. EASTABROOKS, and C. A. PIPER, of Eau Claire, Wis.—*Improved Shingle Machine.*—Patent dated March 18, 1862.—The right-hand side of the bolt bears against the bar L, and as the carriage moves toward the saw, the latter cuts a shingle from the bolt. As the carriage approaches the termination of its forward movement, the pin of the lever M enters a slot of the plate, which brings the lever to a horizontal position. As the carriage approaches the termination of its backward movement, the bars K K are caused to be actuated alternately. The bar L is adjusted alternately in reverse positions, so that the shingles are cut from the bolt, but and point alternately from the other end. Means are also employed for varying the thickness of the shingles, and supporting the same in position until they drop from the carriage through a space in the rear strip D, which is made shorter for the purpose.

Claim.—First, the pivoted bar L, operated through the medium of the bars K K, lever M, plates P Q, and bolt carriages G, substantially as shown, for the purpose of adjusting the bolt from which the shingles are sawed, as set forth.

Second, the employment or use, in connexion with the adjustable bar L, of the rod *p*, provided with the flanch *r*, and fitted in the block J, for the purpose of regulating the width of the shingles, as specified.

Third, in combination with the adjustable bar L, actuated or operated as shown and described, the rod *s*, provided with the bar *u*, and arranged as shown, to serve as a support for the shingle being sawed.

Fourth, the two strips D D', provided with upper bevelled or inclined surfaces, and arranged in relation with the saw E, and the space or opening *b* in the carriage G, as and for the purpose set forth.

No. 34,702.—JOHN SLOAN, of Philadelphia, Pa.—*Improved Insole for Boots and Shoes.*—Patent dated March 18, 1862.—The metal projects beyond the wood, and is folded over a wire which encircles its outer edge.

Claim.—An insole for boots and shoes, made of a thin metal bottom and a thin wooden top, the two united together, in the manner and for the purpose substantially as described and represented.

No. 34,703.—C. E. SNEIDER, of Baltimore, Md.—*Improvement in Revolving Fire-arms.*—Patent dated March 18, 1862.—The hinged frame allows the removal of the cylinders with their axis pin, so that after one cylinder has been discharged, both can be removed and inserted again with their positions reversed, the undischarged one being the foremost. The cylinders are so arranged that the revolution communicated by the ratchet wheels to the rearmost is communicated to the forward cylinder. Metallic cartridges are used in this invention, and the hammer, by means of the guide, is made to reach over the rear cylinder and strike against the flanges of the forward cylinder.

Claim.—First, the employment in a revolver of two many-chambered cylinders or series of revolving chambers, arranged breech to breech upon the same axis pin, substantially as and for the purpose described.

Second, the combination of the guide *q r s* with a pivoted hammer head F, employed in connexion with a revolving-chambered cylinder, in the manner and for the purpose shown and explained.

No. 34,704.—J. F. STEVENSON and T. B. HAMMER, of McKee's Port, Pa.—*Improvement in Mode of Lubricating Axles.*—Patent dated March 18, 1862.—The chambered recess contains cotton wool, or other fibrous material, to be saturated with oil, and the channels allow the oil to oozé out upon the revolving axle. The thumb screw closes the opening through which cotton wool is introduced.

Claim.—The hub A, chambered recess *a*, channels *e*, and thumb screw *g*, when combined and arranged to operate in the manner and for the purpose set forth.

No. 34,705.—ALBERT TRACY, of United States Army.—*Improvement in Tompion for Fire-arms.*—Patent dated March 18, 1862.—The tompion is made of wood or other elastic material, and at its lower end is inserted a wedge which can be raised or lowered by means of the screw shaft and attached head, so that the tompion can be made to contract or expand. For cannon the head is dispensed with, and the shaft can be screwed up or down by a removable key.

Claim,—First, the tompion for small-arms and cannon, as shown in figures 1 and 2, and substantially as described.

Second, the modification shown in figure 4, substantially as described.

Third, the tompion, as claimed in the first and second claims, in combination with the removable key, substantially as described and shown in figure 5.

No. 34,706.—THEODORE TWICKELER, of Boston, Mass.—*Improvement in Needle-Guns.*—Patent dated March 18, 1862.—The spring lever O provided with a catch at one end is placed on the under side of the breech-pin, and is hung near its centre, so that its ends have a vertical play. The rear of the trigger operates to throw the catch out of contact with the front end of the needle-carriage, and thus allows the needle to be forced forward by a coiled spring into a cartridge in the bore of the gun. A thumb-spring lever I, having a shoulder on its top surface, serves to retain the coiled spring in a compressed state, until released by the trigger acting on the catch-lever.

Claim.—The arrangement of the catch-lever O, the spring *i*, and the thumb-lever I, furnished with a stud or shoulder *v*, as set forth, with respect to the needle-bar carriage, and so as to operate in holding the spring L in a compressed state, in manner and under circumstances described.

No. 34,707.—G. E. VAN DERBURGH, of Mamaroneck, New York.—*Improved Oil-proof Cask.*—Patent dated March 18, 1862.—The claim explains the nature and object of this invention.

Claim.—As a new article of manufacture, a cask, a barrel, a keg, a firkin, or other style of vessel, the inner surface of which has been rendered impervious to oil, turpentine, &c., by the single or repeated use of liquid silicate, substantially as set forth.

No. 34,708.—THOMAS VARNEY, of San Francisco, Cal.—*Improved Device for Straining Gold and Silver Amalgam.*—Patent dated March 18, 1862.—The tube being closed at the bottom, is filled with quicksilver. The amalgam is then poured into the vessel, and the cock at the lower part of the tube opened, when the quicksilver will flow out and a vacuum be produced under the strainer, thus causing the quicksilver of the amalgam to be forced through the strainer by the pressure of the atmosphere.

Claim.—The combination of the tub or vessel A, strainer C, and tube D, arranged to operate in connexion with quicksilver, as and for the purpose set forth.

No. 34,709.—THOMAS WARKER, of New York, N. Y.—*Improved Bottle for Ærated Liquids.*—Patent dated March 18, 1862.—The spout of the metal fountain-head is lined with glass, or other suitable material, in order that the aerated liquid may not come in contact with the metal. The shoulder, the alternate grooves, and the ridges on the neck of the bottle, are used to strengthen the attachment of the metal cap, to which the fountain-head is screwed.

Claim.—First, the employment or use of a lining *e* of glass, or other suitable material, such as described, in combination with the metal fountain-head B, substantially in the manner and for the purpose specified.

Second, the arrangement of the circular bead or shoulder *i* on the top edge of the neck *e* of the bottle A, in combination with the alternate vertical grooves and ridges *j k*, as and for the purpose shown and described.

No. 34,710.—R. A. WILDER, of Cressona, Pa.—*Improvement in Hoisting Machines.*—Patent dated March 18, 1862.—The brake wheels are provided with removable flanges for holding a ring or rings of wood made in blocks between which is a middle ring or flange for the purpose of separating that part of the wooden ring which receives the cable from the part that receives the brake band, so that either may be repaired separately. The ends of the brake bar are attached to arms on a shaft supported upon blocks between the boxes of the wheels. The rope is attached to the car by clamping it between two pieces of timber, in grooves formed to fit the strand of the rope, for convenience in increasing or diminishing the distance between the attaching points.

Claim.—First, the combination of the brake band with the rings of wood, or other material substantially the same, inserted in recesses on the perimeters of the brake wheels, substantially as and for the purpose set forth.

Second, also attaching the rope or cable to the car or other weight to be raised or drawn up, by clamping it between two pieces of wood, or other material, (one or both of which should be fastened to said car or weight,) in grooves of the shape in reverse of or formed to fit the strands of the rope, substantially as described.

No. 34,711.—H. M. WYETH, of Pulaski, Iowa.—*Improvement in Pumps.*—Patent dated March 18, 1862.—The pump box is to be immersed below the surface of the water in the well, the discharge pipe rising to any convenient height. By means of the two valves at the top and bottom of the box, both opening inwards, the box is kept always full of water; and by the upward or downward pressure of the piston the water enters from openings at the top and bottom of the box into the discharge pipe, the side valve closing each alternately.

Claim.—The combination and arrangement of the single side valve *e* with the pump box or chamber A and discharge pipe F, substantially as and for the purposes set forth.

No. 34,712.—J. H. CABLES, assignor to the American Knife Company, of Plymouth Hollow, Conn.—*Improved Combination of Knife, Fork, and Spoon.*—Patent dated March 18, 1862.—The knife and fork when joined together are held by beaded pins on the inner scale of the fork-handle, which fit into keyhole-shaped slots in the inner scale of the knife-handle. A hinged catch on the knife-handle catches one of the pins, elongated for that purpose, and holds it so as to prevent end motion. A spring pressing against a shoulder on the spoon holds it in position, and the curved slot permits its removal from the handle.

Claim.—The arrangement of the two parts A B of the handle in combination with knife-blade C, fork D, and spoon E, and with hinged catch *g*, elongated pin *d*, spring *h*, and curved slot *m*, all constructed and operating substantially in the manner and for the purpose shown and described.

No. 34,713.—E. C. DUNNING, assignor to IRVING HULL, of Bridgeport, Conn.—*Improvement in Metallic Cartridge Cases.*—Patent dated March 18, 1862.—It is designed to form a small rabbet or shoulder inside the muzzle of the gun, against which the outer metallic case is stopped, so that in loading, only the powder and ball and thin inner case will enter the piece and the outer case is removed by the withdrawal of the ramrod—the purpose being to obviate the bad effects of fouling the barrel and biting the cartridge when paper is used.

Claim.—A water-proof metallic cartridge case composed of two thicknesses of metal, combined and arranged in the manner and for the purpose substantially as set forth and described.

No. 34, 714.—JOHN EKIN, assignor to Himself, and WILLIAM and S. M. ALLISON, of Xenia, Ohio.—*Improvement in Furnaces.*—Patent dated March 18, 1862.—The fuel and combustion chambers, ash pit and discharge chimney are combined in one continuous flue. The weight of fuel in the supply chamber forwards it to the fire as fast as consumed, and the incombustible matter discharges itself at the lower end of the inclined grate.

Claim.—The combination of the supply chamber B, inclined grate D, slag aperture *e*, close ash pit G, and chimney F, when constructed to operate in the manner and for the purposes explained.

No. 34,715.—THOMAS FISLER, of Camden, N. J., assignor to J. P. REED, of Philadelphia, Pa.—*Improvement in Feed-Bags.*—Patent dated March 18, 1862.—The rods, three or more, are jointed, and when extended are held in position by means of slides on the joints, one end being attached to the bag and the other resting on the ground, so as to form a support for the bag while the animal is feeding.

Claim.—The connecting and folding rod attached to the bag, or its equivalent, arranged as set forth and for the purpose specified.

No. 34,716.—CHARLES GREGOR, assignor to Himself and CHARLES SCHWITZER, of New York, N. Y.—*Improvement in Machinery for Cutting Cork into Strips.*—Patent dated March

18, 1862.—The cutters are of two kinds—one with disk-cutting edges cutting in a plane parallel to that of the revolution of the wheel, the other cutting at right angles to that plane. The cork is cut in strips and packed in the feed box. The transverse cutters passing by the ends of the cork, score it with cuts; the revolution of the wheel then causes the disked cutters to pass across the ends of the cork with a shearing cut, so that the shavings fall in long, narrow strips.

Claim.—First, the revolving wheel *d*, provided with the cutters *e* and *f*, in the manner specified and operating as set forth.

Second, the arrangement of the feed box, provided with the rollers *i k l*, gears *m n o* and *p*, and pinion *q*, and actuated from the wheel *d*, whereby the cork is fed progressively to the action of the cutters, as set forth.

Third, the knives *e e* with the disk-formed cutting edges, in combination with the wheel *d*, substantially as set forth and for the purposes specified.

No. 34,717.—B. B. HANZE, of Morrisville, Vt., assignor to CARLOS PIERCE, of Boston, Mass.—*Improvement in Tents.*—Patent dated March 18, 1862.—The claim and engraving explain the nature and object of this invention.

Claim.—The employment of an expanding and folding frame for distending the upper part of a tent, substantially as described.

No. 34,718.—F. L. KIDDER, assignor to Himself and FREDERICK HOEFT, of Brooklyn, N. Y.—*Improvement in Ice Cars.*—Patent dated March 18, 1862.—The propelling wheels are actuated by means of a crank operating the cog-wheels. The car is steered by the feet acting upon a cross-head, which moves a rod and bars connected with the forward runners.

Claim.—The platform *a* provided with the skates or runners and steered substantially as set forth, in combination with the propelling wheel or wheels *k*, actuated substantially as specified.

No. 34,719.—JOHN KINNIBURGH, of Schott's Iron Works, near Motherwell, Scotland, assignor to WILLIAM KINNIBURGH, of Newark, N. J.—*Improved Wash or Coating for Metallic Moulds.*—Patent dated March 18, 1862.—The mould is heated previous to casting, to prevent the pipe being suddenly chilled, and so becoming brittle, and the application of the composition prevents the pipe adhering to the mould.

Claim.—The employment, for the purpose specified, of a metallic mould, when used in connexion with the wash composed of pitch or coal tar, barm, or yeast, and charcoal or black lead, as described.

No. 34,720.—E. C. MACKINNEY, assignor to Himself and J. H. POWELL, of Peekskill, N. Y.—*Improved Device for Holding Harness Reins.*—Patent dated March 18, 1862.—A plate of metal is secured to the inner side of the dash-board of a vehicle, with an adjustable plate attached, which can be screwed down so as to hold the reins when inserted between the two plates.

Claim.—As an improved article of manufacture, a rein-holder formed of the stationary plate A and an adjustable plate C, actuated through the medium of the screw B, as shown and described.

No. 34,721.—J. J. MÜLLER, assignor to FREDERICK FRANK and J. A. TAUBER, of New York, N. Y.—*Improved Ore Separator and Washer.*—Patent dated March 18, 1862.—In the engraving K and A are the parts of a shaking table, to one end of which a bar is attached. By the action of a cam fixed on a revolving shaft and pressing upon the other extremity of the bar, a forward movement is given to the table, which, when the pressure is removed, slides back again by its own weight; the tables strike against India-rubber buffers, and thus acquire a further vibratory motion. The ore, in a pulverized state, is conducted by a stream of water upon the first table, which, by its vibratory motion, causes the lighter portions of the ore to flow off with the water and the heavier to settle. A second table receives the washings from the first, and, in a like manner, further concentrates the ore. Dam slats D are inserted in front of the tables, by which means the washed ore is prevented from being carried off by the water, and the operation can be continued until the table is filled as high as its sides.

Claim.—First, the arrangement of a series of shaking tables below and in front, respectively, of each other, and set on inclined slides, and actuated in the manner and for the purposes specified.

Second, the dam slats *d d* in combination with the shaking tables, for the purpose and as set forth.

Third and last, the India-rubber buffers A A, applied as specified, in combination with the shaking tables, in the manner and for the purpose set forth.

No. 34,722.—A. RANDEL, assignor to J. J. ECKEL, of New York, N. Y.—*Improvement in Mode of Extracting Oil, Tallow, &c.*—Patent dated March 18, 1862.—The perforations in the cylinder tube and plate, in connexion with the bars, are to allow of the easy escape of oil or grease from the matter under pressure.

Claim.—An oil press, consisting of a bed A, hollow plunger B I, solid-ribbed curb C *a*, surrounded by bands C′, shrunk upon its periphery, perforated cylinder D, perforated central discharge tube E, supporting tube E′, perforated plates F G and H, and bars *c e g*, all constructed, combined, and arranged in the manner and for the purposes explained.

No. 34,723.—S. H. ROPER, Roxbury, Mass., assignor to ELMER TOWNSEND, of Boston, Mass.—*Improvement in Hot-air Engines.*—Patent dated March 18, 1862.—The valve chest containing the valves, with their communicating chambers and passages, are attached to the outside of the case of the hot-air engine, for the purpose of protecting the valves from the direct radiation of the heat, and rendering them easily accessible for adjustment and repairs.

Claim.—As an improvement in hot-air engines, in which the working cylinder is separated by a partition or diaphragm from the furnace or fire box, the arrangement of the valves and their communicating chambers and passages within a valve chest F on the outside of the shell or casing A, substantially as and for the purpose set forth.

No. 34,724.—R. O. DOREMUS and B. L. BUDD, of New York, N. Y.—*Improvement in Treating Gunpowder to Form Cartridges.*—Patent dated March 18, 1862.—This invention is explained by the claim.

Claim.—First, forming the ordinary granulated gunpowder of commerce into solid shape suitable for use as cartridges, or for other purposes, by compacting the same in dry condition within moulds by pressure so applied as to condense said powder into the shapes substantially as described.

Second, the cartridge formed of powder in strata of different degrees of combustibility, and compacted as described and for the purposes set forth.

No. 34,725.—R. O. DOREMUS and B. L. BUDD, of New York, N. Y.—*Improvement in Ball Cartridges.*—Patent dated March 18, 1862.—The powder is united to the ball by compacting the former under pressure in the cavity of a Minie ball, or by enclosing a pin, if the ball be of other form, in a suitable mould.

Claim.—The described method of forming cartridges by uniting the ball directly with the compacted granulated powder, as set forth.

No. 34,726.—G. W. AYRES, of Rahway, N. J.—*Improvement in Portable Ovens.*—Patent dated March 18, 1862.—The upper part of the oven consists of three shells or plates, forming two chambers, the outer one of which being intended to contain sand, which is put in at the top and taken out at the lower part of the sides when the oven is transported, and the inner one constitutes a flue space. Two furnaces, perforated on their inner sides, are placed below the oven, between which is secured diagonally a plate, for the purpose of passing the smoke, &c., to both sides of the oven.

Claim.—The arrangement of the shells of the oven forming the flues and the space for the non-conducting material, the exterior shell having the openings, as described, for the putting in and taking out of the non-conducting material, in combination with the furnaces and diaphragm, as recited.

Also, the arrangement of the furnaces, diaphragm, and flues, as set forth.

No. 34,727.—RICHARD MONTGOMERY, of New York, N. Y.—*Improved Iron-Clad Vessels.*—Patent dated March 18, 1862.—A series of angulated recesses are secured to the sides of the vessel, leaving sharp projecting edges alternately with the recesses, by which projectiles may be directed into an opening and pass through the vessel, or be made to spend their force against that portion supported by the end of the beams which extend across and support the gun deck. The beams may be hollow tubes for the projectiles to pass through, or they may be solid and made of iron or timber.

Claim.—First, the angulated recesses in connexion with the openings and hollow beams, by which the missile can be directed and conveyed across the ship, substantially as described.

Second, in combination with the recesses, the supporting solid beams, placed and operating in the manner as described, and for purposes set forth.

No. 34,728.—ABRAHAM BARE, of Mexico, Ohio.—*Improved Pans for Evaporating Saccharine Juices.*—Patent dated March 25, 1862.—The first pan directly over the fire is provided with a series of vertical bars intended to remove the scum when the sirup is drawn off through openings in these bars. A pan directly over a vessel containing hot steam exposed to the fire then receives the clarified sirup; from thence it passes to a vessel provided with a false bottom, under which the steam escaping from the boiler circulates, and thence it passes into the evaporators.

Claim.—First, so constructing pans for evaporating saccharine juices as that in the first stages of evaporation it is done by the agency of fire alone, and in the second stages by steam, first closely confined and very hot, then in apartments less heated, until the desired effect is obtained.

Second, that particular construction of evaporator, wherein the same fire which evaporates in the first stages generates at the same time the steam for the second stages of evaporation.

Third, the double pan, constructed as described, the first lower section of which contains the generator, the second the steam chamber, and the third and additional sections for gradually decreasing the temperature, for the purposes set forth.

Fourth, the slide or valve between the steam chamber and the last section below, in combination with the double pan, substantially as and for the purpose described.

Fifth, the heater or supply pan for water, arranged as described, in combination with the generator, for the purpose set forth.

Sixth, the first pan, constructed as described, in combination with the second pan, when its separate sections are heated by different degrees of heat, for the purpose set forth.

No. 34,729.—HENRY BERG, of Davenport, Iowa.—*Improvement in Breech-Loading Fire-arms.*—Patent dated March 25, 1862.—By means of eccentric flanges formed upon the bolt and fitting within the slot of the breech, a rotation of the bolt will move the barrel forward or backward, the rotation being effected by a lever which is retained in either position by a spring catch. The yielding lever is fulcrumed to the face-plate and held in a forward position by a spring J and catch, which latter serves to disconnect the self-cocking apparatus. Two short arms project horizontally from the forward end of the lever which operates to full-cock the hammer on the descent of the barrel. An adjustable elastic plate fits over the orifice of the priming passage, and permits the withdrawal of the priming.

Claim.—First, the crank-lever F *f*, and eccentrically flanged bolt E *e e'*, constructed as described, and employed in connexion with the hinged barrel D *d d'*, and vertically slotted breech B, in the manner and for the purposes explained.

Second, the yielding lever I *i i'*, constructed and employed in the manner explained, to raise the hammer by the depression of the barrel.

Third, the catch K *k*, employed in the described connexion with the sliding lever I to disconnect the self-cocking apparatus.

Fourth, the sliding-plate O, employed in the manner shown and explained, to cover the priming passage M, or permit the withdrawal of the priming when desired.

No. 34,730.—R. C. BRISTOL, of Chicago, Ill.—*Improvement in Breech-Loading Ordnance.*—Patent dated March 25, 1862.—Wedges are inserted in a mortise in the yoke and arms, in order that, when the breech is not forced into close contact with the concave surface of the rear end of the cannon, on account of the wear of the cams, the yoke can be slid forward on the arms by loosening the wedges.

Claim.—First, supporting the trunnions of a revolving breech upon movable blocks, acted upon by springs, in the manner described, for the purpose of freeing the breech from contact with the main barrel, when the pressure which forces the breech against the main barrel is removed.

Second, so constructing and hanging the turning breech on trunnions and against a yielding force that when the breech is released it will automatically move out of contact with the main body of the cannon, and also automatically turn its bore to a vertical position, substantially as and for the purpose set forth.

Third, the yoke E, in combination with the ears F, and wedges *m* and *e*, in the manner and for the purpose substantially as set forth.

Fourth, the combination of a revolving breech, with the cams *i*, springs *k*, and wedges *l* and *m*, substantially as described.

Fifth, the rest *b*, in combination with the revolving breech B, for not only arresting the excessive automatic revolution of the breech, but for supporting it in a horizontal position, substantially as described.

No. 34,731.—ALBERT BROWN, of Troy, N. Y.—*Improvement in Stove Grates.*—Patent dated March 25, 1862.—The grates are formed of transverse bars connected with longitudinal bars having cast on their ends pins which pass through oblong slots in the levers, by means of which a simultaneous motion of the grates in opposite directions is caused when the main lever is actuated. Upon the side bars of the frame are formed recesses at intervals for the purpose of preventing their expansion outwards by the action of the heat.

Claim.—First, the arrangement of the transverse-barred grates D and studs *m* with the slotted pivoted levers B B', as shown and described.

Second, the arrangement of the recesses *e* upon the sides *d*, as and for the purpose shown and described.

No. 34,732.—F. E. BROWN, of Hightstown, N. J.—*Improvement in Cultivators.*—Patent dated March 25, 1862.—A gang of ploughs is attached to a mounted frame in such a manner that the ploughs are allowed to rise and fall so as to correspond to the inequalities of the surface of the ground, and at the same time are rendered capable of being readily raised above its surface when not required for use. They are also adjustable so that they can be separated to a greater or less distance apart, or made to penetrate the ground to any required depth.

Claim.—First, the combination of the adjustable slides F, plates G, slotted pendants E, and connecting rod H, with each other and with the standard I, in the manner shown and described.

Second, the arrangement of the pendant-slotted bars E J, slides F K, plates G L, rods H M, standards I N, and arms *i o*, with each other and with the arms *q*, links *j*, arms *s*, shafts *l*, and lever O, as and for the purpose shown and described.

No. 34,733.—HARVEY BROWN, of New York, N. Y.—*Improvement in Chimneys for Lamps.*—Patent dated March 25, 1862.—The claim and engravings explain the nature of this invention.

Claim.—First, the arrangement and construction of a lamp chimney, having a glass bulb for its base, with a sheet-metal tube attached above, substantially in the manner and for the purposes set forth.

Second, the shade for this lamp chimney, constructed and arranged substantially in the manner and for the purposes set forth.

No. 34,734.—C. E. BROWNELL, of East Haddam, Conn.—*Improvement in Cylinders for Machine Cards.*—Patent dated March 25, 1862.—The movable head is fitted to turn on one end of the cylinder and upon the shaft. It is provided with curved slots, through which pass screws which secure it to the cylinder and admit of its being turned to tighten up the fillet, one end of which is secured to the movable head and the other end to the further end of the cylinder, the object being to obviate the necessity of unwinding and rewinding the fillet as the slack is driven to one end of the cylinder.

Claim.—Providing the cylinder with a movable head B, or otherwise making a portion of the same, to which one end of the card fillet is attached, movable about its axis relatively to the other portion thereof, to which the other end of the fillet is attached, substantially as and for the purpose specified.

No. 34,735.—E. P. BROWNELL, of East Haddam, Conn.—*Improvement in Crank Motion.*—Patent dated March 25, 1862.—To the hub of the fly-wheel is secured a coiled spring, the free end of which presses against the wrist so as to hold the slide against the rim of the wheel which constitutes the stop. The slide being slotted is allowed a longitudinal movement, and when at the dead point, occupies a position obliquely to the pitman. The pressure on the treadle causes the slide to move forward with the wrist until the latter has passed the centre, or dead point, when the spring forces the slide against the stop until it is again required to move forward therefrom.

Claim.—The combination of an obliquely sliding wrist pin, a spring and a stop, the whole applied in combination with the crank shaft and pitman, to operate substantially as and for the purpose specified.

No. 34,736.—E. and A. BUCKMAN, of East Greenbush, N. Y.—*Improved Knife, Fork, and Spoon-Cleaning Machine.*—Patent dated March 25, 1862.—The spring planes, cylinders and ledge are to be made of cork, and covered with brick-dust or emery, so that the articles which it is desired to clean can be polished by friction upon them.

Claim.—A knife, fork, and spoon-cleaner, composed of the spring planes E E, cylinders H H', ledge G, arranged as set forth, and otherwise made as shown and described.

No. 34,737.—O. R. BURNHAM, of New York, N. Y.—*Improvement in Hoop Skirts.*—Patent dated March 25, 1862.—The claim and engraving explain the nature of this invention.

Claim.—First, the construction of skirt hoops of strips of steel or other metal, arranged edge to edge, and woven or braided together with fibrous material, so that each hoop shall be composed of two or more strips, substantially as specified.

Second, the combination in a skirt of tapes or straps C C woven double at the places where the hoops are connected, and single between those parts; hoops which are composed each of two or more strips of steel, united by weaving or braiding, as described, and are inserted through the double portions of the straps, metallic clasps passing through both the tapes or straps and the hoops, all as specified.

No. 34,738.—JAMES CANFIELD, of Sabula, Iowa.—*Improved Gold-Washer.*—Patent dated March 25, 1862.—The bottom of the washer consists of two parts, over one of which is a polished plate of metal which conducts the ore to the sieve, which latter is inclined from the front to prevent the particles of gold from washing off. Under the sieve is a box to hold the gold as it is washed.

Claim.—The gold washer, constructed and operating in the manner and for the purposes substantially as delineated and set forth.

No. 34,739.—FRANK CHASE, of South Sutton, N. H.—*Improvement in Blind and Shutter Fastenings.*—Patent dated March 25, 1862.—This device is for the purpose of allowing the blind to be opened or closed without raising the sash, and also for fastening it firmly in either position. The bar passes through a notch in the lower part of the sash.

Claim.—The curved rod or bar D, applied to the blind or shutter C, as shown, provided with the lateral projection *b* and eye *f*, and used in connexion with the hook *a* and pin *e* attached to the window frame A, substantially as and for the purpose set forth.

No. 34,740.—R. J. COLVIN, of Lancaster, Pa.—*Improvement in Combined Sword and Pistol.*—Patent dated March 25, 1862.—The mechanism of the lock is covered by a sheath or outer casing attached by screws to the blade of the sword. The end of a hooked spring attached to the side of the hammer moves upon spiral flanges upon the axis of the revolving chamber, and thus the motion of the hammer causes the chamber to revolve.

Claim.—The arrangement and combination of a sword with a revolving pistol, when the said revolving pistol is arranged or attached to the back of the blade of the sword, in advance of the handle, by flanges or otherwise, as shown and described.

No. 34,741.—J. D. CROCKER, of Norwich, Conn.—*Machine for Cutting Corks for Stoppers.*—Patent dated March 25, 1862.—The nature and object of this invention, which does not admit of a brief description, are expressed in the claim.

Claim.—First, the tilting arms G G, one or more, provided with the spindles r^*, and arranged in relation with the rotating cutter E, in connexion with the rotary arbors H, one or more also placed on the arms G G, and provided with the spindles I, as and for the purpose set forth.

Second, operating or sliding the spindles I so that they may grasp and release the corks at the proper time, by means of the bands or rings J J, slide M, spring N, lever O, and the shoulder *j* attached to the bar *k*, as set forth.

Third, rotating the arbors H H through the medium of the adjustable wheels U U on the shaft S S, and the pinions *d d* on the arbors H H, arranged as shown, so that the arbors H H may be rotated as described.

Fourth, the levers W, when used in combination and arranged in relation with the arms G G, as shown, to operate as feeders, as set forth.

No. 34,742.—J. D. CUSTER, of Norristown, Pa.—*Improved Lamp-Burner.*—Patent dated March 25, 1862.—This lamp is designed to burn coal-oil without a chimney. The wick extends entirely across the top of the tube, the lower part of which being round, admits of the wick being folded or rolled together. At the side of the wick tube is attached a tube to hold a shade stem, to be sustained in position by a spring, which on being pulled out allows the shade stem to fall and lower the shade. A cap having a larger or smaller opening may be placed over the wick tube to regulate the size of the flame when desirable.

Claim.—First, the bevel lamp wick tube B and the mode of folding up the wide wick, or wicks, below the wick shaft C, substantially as described and shown.

Second, the shade tube D and its spring E, one or both, to be used on the burner or not, as desired, substantially as described.

Third, the regulating cap F, to be used on the burner or not, as desired, substantially as described and shown.

No. 34,743.—W. W. DAVIS, of Portland, Me.—*Improvement in Stove-pipe Thimbles.*—Patent dated March 25, 1862.—The thimbles are constructed with openings of various sizes and forms, for the purpose of admitting pipes of different diameters and shapes, and for varying the extent of the heating and ventilating orifices. The thimble is provided with a case, to which it is attached by straps turned upon its edges. The case is inserted in the wall, as a safeguard against the effects of heat.

Claim.—First, the cubical box B, whether constructed as represented in the drawings, with four of its sides only perforated with holes of various sizes and forms, the fifth whole and sixth removed, or whether all of its sides are so perforated, as and for the purposes specified.

Second, in combination with the above the case or safeguard A, constructed as described, as and for the purposes set forth.

No. 34,744.—R. O. DOREMUS and B. L. BUDD, of New York, N. Y.—*Improvement in Water-proofing Cartridges.*—Patent dated March 25, 1862.—The compressed cartridges are made water-proof by varnishing the outside with shellac, collodion, or other material not soluble in water.

Claim.—The water-proofing of compacted cartridges, made by compressing dry granulated powder, as set forth.

No. 34,745.—OTTO ERNST, of New York, N. Y.—*Improvement in Tobacco Pipes.*—Patent dated March 25, 1862.—The tube containing the tobacco is provided with an inner tube for the smoke, so fitted that only a portion of the tobacco is ignited at one time, and the tobacco is pressed forward as consumed by means of a follower actuated by a spring, for the purpose of keeping the tobacco dry and free from the condensation of vapor.

Claim.—The combination of the inner tube *c* and follower *d* with the spiral spring *e*, when constructed to operate in the manner and for the purposes substantially as described.

No. 34,746.—ADAM and WILLIAM FISCHER, of New York, N. Y.—*Improved Imitation Marble.*—Patent dated March 25, 1862.—The composition consists of a precipitate formed by a mixture of the solution of alum and lime, to which is added glue and thin tissue paper; any desired color may then be mixed and the whole formed into a homogeneous mass, which is spread in thin plates and dried.

Claim.—The combination of matter, substantially as described, for the purpose of making artificial marble, in the manner and for the purpose substantially as described.

No. 34,747.—J. R. FINCH and T. W. HENDERSON, of Dayton, Ohio.—*Improvement in Seeding Machines.*—Patent dated March 25, 1862.—The seed-box is provided with a shaft, upon which are placed wheels having upon the centre of their peripheries a zigzag flange and upon their edges lugs, which, as the wheels revolve, serve to stir the grain over the openings, to prevent clogging and effect its regular distribution. The boot through which the seed falls is secured to the drag-bar by means of a rod which carries at its outer end a roller following the boot.

Claim.—First, the employment of the wheels D D, provided upon their peripheries with the zigzag or cam flange represented, and with the lugs *a a*, arranged and used upon the wheel and the flange, as is fully set forth, for the purpose specified.

Second, pivoting the boot H to the drag-bar G through the ear at the upper front end of the said boot by means of the rod J, which carries the roller I behind the boot, substantially as and for the purpose set forth.

No. 34,748.—A. C. F. DEROCQUIGNY, D. GANCE, and LOUIS HANZO, of New York, N. Y.—*Improvement in Sewing Machines.*—Patent dated March 25, 1862.—This invention relates to a method of obtaining and controlling a lateral or side-to-side movement of the perforating needle in working button holes, and in that kind of embroidery known as scalloping. In connexion with this needle a hook is provided, by which the needle thread is caused to take a turn round the needle in the formation of each stitch, so that the needle thread forming part of one stitch is caused to pass round the portion of the same thread, forming a part of the next stitch, the needle thread being alternately passed through the cloth and by the edge of the holes and locked by the shuttle thread in each case, two movements of the needle up and down and two lockings of the thread being required to make a complete stitch. A series of levers within the box, actuated by the motion of the needle bar, serve to lift the presser. A means of operating the shuttle is provided, by which the necessity of a raceway or of any fixed shuttle guide is obviated.

Claim.—First, the combination with the swinging tube F and box H, or other equivalent swinging guides for the needle bar, of a grooved plate K, a lever L′, two switches L L, and a pin *i*, the whole applied and operating substantially as described.

Second, the combination, with a laterally moving needle and a shuttle, of a hook *p*, applied to operate, substantially as described, with reference to Figs. 8 and 9.

Third, the feed mechanism, composed of the grooved dog T, supporting point 21, arm T′, and curved bar U′, the said bar deriving a reciprocating motion perpendicular to the bed of the machine, and the said arm being adjustable along the curved bar, substantially as and for the purpose specified.

Fourth, the described mechanism for lifting the pressure.

Fifth, operating the shuttle by means of two reciprocating holders Z Z′, which deliver it from one to the other, and in so doing pass it through the loops of the needle thread, substantially as described, without the use of any fixed guide in contact with the shuttle.

No. 34,749.—D. R. FRASER, of Chicago, Ill.—*Improvement in Packing for Pistons.*—Patent dated March 25, 1862.—Cut and uncut rings are so adjusted within a piston that both shall be free to move independently of the piston head and followers. Steam inlet passages upon the piston connect with channels upon the outer faces of the uncut rings, so that a portion of the entering steam first acts upon the faces. The cut ring is held steam-tight by means of the face channels upon the uncut rings, and it is distended by the action of the spring wedge. The steam is admitted by valved openings in the shouldered uncut rings. By means of two springs and a screw and wedge the moving parts of the piston are suspended in proper position relatively to the axis of the piston head or axis of the engine cylinder.

Claim.—First, adjusting within a piston, cut and uncut rings, so that both shall be free to move independently of the follower and piston head, substantially as described.

Second, the combination of the channels *f* and the passages *r*, substantially as and for the purpose described.

Third, the use of the uncut rings, with face channels *f* for holding the cut packing ring steam-tight, substantially as described.

Fourth, the combination of the uncut rings and the spring wedge, so that by the force of steam and the action of the wedge, the cut ring shall be held both steam-tight and distended, substantially as and for the purpose described.

Fifth, the combination of the piston head valves, shouldered uncut rings, and the cut ring, for the purpose set forth.

Sixth, the combination of the two springs, screw and wedge, substantially as and for the purpose described.

No. 34,750.—D. S. GARDNER and N. A. MANNING, of Greene, N. Y.—*Improvement in Presses for Compressing and Baling.*—Patent dated March 25, 1862.—The plunger is forced

down by the crank acting, as shown by the drawing. By means of the pawl and lever the plunger is then forced down slower, and at the same time with greater force, for the purpose of further compressing the substance.

Claim.—The suspended nut and toothed wheel D and pinion E, placed, respectively, on the screw C of the follower or plunger B and crank shaft F, and arranged to gear into each other in combination with the fixed ratchet H, on shaft F, and loose lever I, provided with the pawl J all being arranged to operate as and for the purpose set forth.

No. 34,751.—EDWIN GORDON, of Taunton, Mass.—*Improvement in Rotary Diggers.*—Patent dated March 25, 1862.—The two cylinders are of unequal diameter, and are connected by gears in a common frame, so that the digger rotates in a direction opposite to the rotation of the driving wheel. The tines upon the larger cylinder play between the diggers so as to prevent clogging. The adjustable hinged draught bar is so arranged that by depressing said bar, whereby the front end of the frame is raised, the small digging cylinder is depressed, and by elevating said draught bar the cylinder will be raised also.

Claim.—First, the combination of the draught bar, *c* and adjusting lever *e* with the bar *g*, upright *f*, arm *b*, and side cases *a*, as and for the purpose shown and described.

Second, the arrangement of the cylinders A E with each other and with the gears *h i k l*, as shown and described.

No. 34,752.—J. I. HERRICK, of Milwaukie, Wis.—*Improvement in Stoves.*—Patent dated March 25, 1862.—Between the stove and the chamber connecting the flues there is an open space, which adds to the heating power of the stove by allowing air to circulate between the two chambers. Flues circulate vertically in the flue chamber, but can be closed by means of a damper, so that the heated air can escape by the smoke-pipe. The removable pan is inserted under the fire, to receive soot, &c., when cleaned.

Claim.—The flues *f f*, removable pan P, heating space D, when combined with a heating stove, constructed and arranged to operate as described.

No. 34,753.—JAMES HIGGINS & T. S. WENTWORTH, of Salford, England.—*Improvement in Throttles for Spinning Cotton.*—Patent dated March 25, 1862.—The axle of the spindle passes through the fixed tube *b*. On this fixed tube the boss *k*, having at its upper part a shoulder on which the bobbin rests, is attached to the copping rail by an arm, so as to move up and down. The arm to which the thimble is attached has at each end a screw, thus giving it a swivelling motion.

Claim.—We claim as our invention, and as applied to machines in which a fixed tube is traversed to the copping rail, causing the part which so traverses, to be capable of swivelling; also in reference to machines in which a tube passes into the bobbin, after the manner illustrated at Fig. 3, we claim so connecting the said tube to the copping rail that it shall be capable of swivelling.

No. 34,754.—JEDEDIAH HOLCOMB, of Brandon, Vt.—*Improvement in Steelyards.*—Patent dated March 25, 1862.—The open head is attached to the beam and rests upon props upon the side of the frame. The weight is attached to a knife-edge near the extremity of the beam, which is enclosed by the open head. The object of this invention is to afford a beam which can be used in weighing large weights without lengthening it or using a heavy counterpoise.

Claim.—The use of the open head A, substantially as set forth, in combination with the beam of a steelyard, for the purposes described.

No. 34,755.—JARED HOLT, of Albany, New York.—*Improved Device for Drawing in Trunk Stays.*—Patent dated March 25, 1862.—The springs are attached in the middle to the lid of the trunk, and have hooks or rings upon their ends, to which the trunk stays are attached. When the lid is up, the springs allow the stays to support the lid; but when the lid is closed, the stays are drawn in by the action of the springs.

Claim.—The arrangement of the springs D, or their equivalent, in combination with the trunk stays C, substantially in the manner and for the purpose shown and described.

No. 34,756.—C. H. B. KELLOGG, of Arcadia, Ohio.—*Improved Washing Machine.*—Patent dated March 25, 1862.—The bearings of the rubber journals are supported on two hollow uprights attached to the sides of the box, through which uprights, pass wire rods which connect the blocks covering the bearings of the rubber, to springs hung upon a piece of wood attached to the bottom of the box, for the purpose of holding the rubber down upon the belt which passes over rollers.

Claim.—The arrangement described of the springs 10 10, in combination with the rods 14 14, bearing blocks 9 9, hollow side pieces 6 6, and the receptacle in which the clothes are to be washed, substantially as and for the purposes set forth.

No. 34,757.—HENRY LOWENBERG, of Boston, Mass.—*Improved Composition for the Manufacture of Mouldings, and other purposes.*—Patent dated March 25, 1862.—This invention is explained by the claim.

Claim.—A composition made by combining starch and sawdust or comminuted wood by steam and by stirring them while under the influence of steam, so as to reduce them to a paste or dough capable of being moulded and dried, and becoming flexible when dry.

Also, the combination of potash, or an alkaline equivalent, with the composition of starch and sawdust, while being treated as described, the same being for the purpose as above specified.

No. 34,758.—A. E. LYMAN, of Williamsburg, Mass.—*Improvement in Candlesticks.*—Patent dated March 25, 1862.—The candlestick is formed of a sheet of metal having a series of leaves around a central disk, which forms the bottom. Two of these leaves are designed to be turned up to form the socket, and the other two are pointed so as to be stuck into wood or answer as a stand, or may be bent upon a rod.

Claim.—The candlestick, as described, as a new article of manufacture, substantially as specified.

No. 34,759.—J. D. LYNDE, of Philadelphia, Pa.—*Improved Bottle-Stopper.*—Patent dated March 25, 1862.—The groove in the plug is made so as to give the rubber ring a tapering form for easy insertion into the bottle, and to make a tight joint when pressed down. Channels are made across the top of the stopper to hold the twine which is attached in the eye of a wire clasp, fitting in depressions near the top of the stopper, for the purpose of retaining the latter when it leaves the bottle.

Claim.—The arrangement of the rubber packing D, which gives it a tapering shape when not in use, and causing it to make the joint, as described, when pressed into the bottle.

The channels B B in the top of the stopper, for the purpose set forth.

The device, Fig. 6, to attach the stopper to the neck of the bottle; the whole constructed and operated substantially as and for the purposes set forth.

No. 34,760.—J. P. MANNY, of Rockford, Ill.—*Improvement in Harvesters.*—Patent dated March 25, 1862.—The triangular platform placed immediately behind the finger beam is designed to receive the cut grain, and to enable the delivery of the bundles to the raker in a suitable situation, and in convenient form for binding. The upright fence H, and its attachments I and i, prevent the grain from being thrown off one side, and, owing to the slope of the fence L, the grain which falls upon it is thrown upon the platform in a compact gavel, and in reach of the raker. The foot-board acts as a fence to prevent grain from clogging the gearing of the machine. The raker sits on the seat with his face quartering to the horses, and is enabled thus to easily manipulate the rake. The construction of the platform is such that the raker delivers a gavel of grain in four different ways, each of which is convenient for the binders, and the machine is enabled to operate equally well, whether the grain be tall, short, clogged, or lodged, or in any other condition.

Claim.—First, the triangular platform E, when constructed and arranged substantially in the manner described for the purpose set forth.

Second, the combination of the triangular platform E with the finger beam D and raker's stand or seat L, when the whole are arranged in relation to the driving wheel, and substantially in the manner and for the purpose described.

Third, the combination of the platform E, foot-board M, and raker's seat L, as and for the purposes described.

No. 34,761.—J. P. MANNY, of Rockford, Ill.—*Improvement in Harvesters.*—Patent dated March 25, 1862.—The converging gear frame, in combination with the hinged diverging hounds and rigid attached bar, causes the pull of the horses to come upon the machine, so that the finger beam conforms to the inequalities of the ground. The horizontal frame affords a support to the raker's and driver's seats. To it is attached the curved lever N, the middle of which is connected by a rigid bar to the gearing end of the finger beam, while its extremity is attached by a cord passing over pulleys to the further extremity of the finger beam, thus allowing its elevation, the sweep of the points of attachment upon the curved lever being such as to keep the beam horizontal in any position. The caster wheel is locked by a hook attached to the bar, and fitting into a staple on the caster.

Claim.—First, the combination of the converging gear frame B with the hinged converging hounds *c* and rigid tongue C, when arranged and operating substantially in the manner and for the purposes described.

Second, the combination and connexion of the gearing frame and finger beam with the horizontal frame J, by means of both a flexible and a rigid connexion, substantially as described, for the purpose of keeping the finger beam horizontal in every position, as set forth.

Third, locking the caster wheel K, for the purpose of preventing lateral motion of the machine when working on hill-sides, substantially in the manner described.

No. 34,762.—J. P. MANNY, of Rockford, Ill.—*Improvement in Harvesters.*—Patent dated March 25, 1862.—The shield plate is attached to the inner side of the outer converging bar, and is constructed with a flange protecting the cogs upon the gearing wheel, so as to prevent

dust, &c., from clogging the gearing. The countershaft is made larger at the extremities, and fits in a slot upon a yoke setting horizontally upon the frame. This can be moved by a lever acted upon by the foot of the driver. When pushed back the slot on the bevel wheel can be forced in gear with the pinion wheel. The engraving explains the details of the construction.

Claim.—First, the combination of the driving wheel A and gear wheel S with the shield or guard plate S′, constructed and arranged as and for the purposes described.

Second, the combination of the countershaft *t* with the sliding plate *x*′, constructed, arranged, and operating as described. for the purpose of throwing the mechanism into or out of gear.

No. 34,763.—J. P. MANNY, of Rockford, Ill.—*Improvement in Mowing Machines.*—Patent dated March 25, 1862.—The horizontal bar, which is an extension of one of the hounds of the tongue, has the bent lever and attached handle so arranged as to be convenient to the driver. The combination embraces a number of devices which do not admit of a brief description.

Claim.—First, mounting the apparatus which regulates the height of the finger beam on an extension of one of the hounds of the tongue, as and for the purposes described.

Second, the combination in a mowing machine of a finger beam, gearing frame, hinged tongue, and driver's seat, when the whole are arranged and operated substantially in the manner described.

No. 34,764.—M. H. MANSFIELD, of Ashland, Ohio.—*Improvement in Clover Machine.*—Patent dated March 25, 1862.—The teeth upon the cylinder are so formed that while one part is being worn, the other part is sharpened, and the cylinder may be reversed when necessary to bring the sharpened edges into action. The ends of the shaft are hung in boxes supported in the centre of a ring by screw points passing through bearings on the frame, thus allowing the boxes to be adjusted. A revolving feeder is placed in the lower part of the upper hopper for the purpose of causing a regular and uniform feed of the unhulled clover to the cylinder.

Claim.—The reversible cylinder C, in combination with the self-adjustable box D, primary and secondary hoppers M N, with revolving feeder O, as and for the purpose set forth.

No. 34,765.—A. MCGUFFIE, of Rochester, N. Y.—*Improvement in Truss Bridges.*—Patent dated March 25, 1862.—A number of hollow sections of cast or wrought iron are constructed with their ends bevelled, so that by abutting against each other, or against interposed angular blocks, as to form the arch. Iron posts intersect the arch between the sections, and serve to sustain the roadway, the lower parts being connected by wrought iron links. Top cords and braces are also used, as shown in the engraving, the object being to prevent buckling, and obviate lateral vibration.

Claim.—The combination of the arch sections A A, (either with or without the interposed heads or blocks B B,) the posts C C, the joint blocks E, the links D D, diagonal tension rods *a a*, top cords F F, and lateral braces *c c*, the whole arranged substantially as specified.

No. 34,766.—F. H. MOORE, of Boston, Mass.—*Improvement in Apparatus for Cutting Garments.*—Patent dated March 25, 1862.—The blade is made narrow, and when in a vertical position, or nearly so, is received into a guard or shield, which protects it, and prevents its twisting when cutting on a small curve; and the blade is so hung as to be inclined to the plane of the table as required to suit the work on which it is to operate, and to have a draw cut in a straight line or a large curve. By forming the blade with an offset or bend, it is made to cut more rapidly when working in or near a vertical line, and follow the pattern or small curves without disturbing the pattern.

Claim.—First, in machines for cutting out garments, hanging the blade *f* to a reciprocating frame, so that the position or inclination of the blade with respect to the plane of the table A may be varied as required, substantially as specified.

Second, bending forward or projecting a portion of the cutting edge of the blade *f*, and extending the cutting edge below the bend, substantially as shown in Fig. 1, for the purpose specified.

No. 34,767.—L. F. NOE, of New York, N. Y.—*Improved Paddle-Wheel.*—Patent dated March 25, 1862.—The arms of one set are bent, those of the centre are double or crotched at their ends, and those of the third set are straight. The floats are attached to the arms, so as to set obliquely to the axle of the wheel, the inner ends of each of the two sets coming between two of the inner ends of the other set, the object being to lessen the waste of propelling power caused by the action of back water.

Claim.—The combination of the middle arms 2 2, forked or raised as described, to receive the buckets from each side, with the straight arms 3 3, the bent arms 1 1, and the straight or flat buckles 4 4, substantially as described, and accomplishing the purpose set forth.

No. 34,768.—N. W. NORTHRUP, of Greene, N. Y.—*Improvement in Hot-Air Stoves.*—Patent dated March 25, 1862.—The combustion chamber is placed within a radiating case and has

at the lower part two fire chambers, each provided with a swinging grate hung upon pivots. An opening is made through the bottom of the stove for the admission of air to the space between the fire chambers. Dampers are arranged so that air may be drawn up or down through the grates alternately, as may be required, when they are replenished.

Claim.—The combination with the combustion chamber B of the double fire boxes, the revolving or swing grates, the air-heating chambers and flues, and the air passages E, the governing dampers *m* I I *k k*; the whole being constructed and operated substantially as described.

No. 34,769.—N. W. NORTHRUP, of Greene, N. Y.—*Improvement in Coupling Shafting and Rods.*—Patent dated March 25, 1862.—The coupling consisting of two parts, one of which is provided with a rib that fits in a groove lengthwise of the axle, and the other with a cross rib fitting in a corresponding groove. The outer surface of the coupling is made tapering, and over it fits a sleeve secured by a set-screw.

Claim.—The coupling made in two halves, as described, with the grooves, ribs or flanges, and band or sleeve, and set-screw combined, and for the purposes set forth.

No. 34,770.—M. J. PALMER, of Homer, N. Y.—*Improvement in Churn Dashers.*—Patent dated March 25, 1862.—The arrangement of the alternate air chambers and opposite inclined floats is designed to force air into the cream with each semi-revolution of the dasher, and prevent rotary motion of the cream, while the whole is kept in constant motion.

Claim.—A horizontal churn dasher, with the slats or floats inclining in opposite directions upon opposite sides of the shaft, in combination with bars parallel with the shaft, with the horizontal U-shaped grooves closed at the ends, and so forming an air chamber as they pass into the cream.

No. 34,771.—C. O. PARMENTER, of Amherst, Mass.—*Improvement in Machines for Forming Bonnets.*—Patent dated March 25, 1862.—The two parts composing the clamp have an opening in their centre to correspond with the size and shape of the hat-block, the lower clamp fitting over the hat-block. The clamps are attached severally to bars that move up and down between vertical guides. An annular flanged stretcher is secured upon the lower end of a vertical spindle which moves up and down. A hand-wheel provided with a screw-thread is fitted upon the spindle, so that when the fabric is stretched over the hat-block by the clamps, the stretcher is brought down, causing the fabric to fit closely around the block, and the brim to conform in shape with the base of the crown. Hats or bonnets may thus be formed from one or more pieces of palm-leaf fabric at one operation.

Claim.—The combination of the stretcher H with the clamps D E, and former J, the said parts being constructed and operating together as shown and described.

The combination of the movable suspension spindle L, and adjusting wheel I, with the stretcher H, substantially as shown and described.

No. 34,772.—C. W. PINKHAM, of Fond du Lac, Wis.—*Improved Burning Fluid.*—Patent dated March 25, 1862.—The fluid consists of a combination of refined petroleum, benzole, naphtha or benzine, gum camphor, and an essential oil. It is designed to be used in lamps without chimneys.

Claim.—The fluid, for illuminating purposes, composed of the ingredients, substantially in the manner and proportions described and set forth.

No. 34,773.—A. P. PITKIN, of Hartford, Conn.—*Improvement in Apparatus for the Manufacture of Illuminating Gas.*—Patent dated March 25, 1862.—The liquid joint on the condenser is formed in this manner: The condenser is divided about midway up the sides by a horizontal partition; around the openings which admit the tube of the retorts, tubes of any desired height are placed. Cylinders closed at the top are placed concentric to all the tubes; when the retort tubes are inserted in the tubes attached to the partition of the condenser, the cylinders cover the opening, and the sides reach nearly to the partition, thus forming a liquid air-tight joint.

Claim.—First, making the front or back plate (one or both) with one or more collars *c* cast or put on to them, cylindrical shape, or otherwise, and sufficiently large to admit of the retorts being removed when bulged or expanded from use, substantially as described.

Second, making the retorts *d*, with one or more flanges or rings *e* cast or put on to them, cylindrical shape or otherwise, and sufficiently large to fill the collars on the plate *a*′.

Third, forming an expansion joint for retorts by means of a liquid joint on the condenser or cooler, substantially as shown and described.

No. 34,774.—HENRY PORT, of New York, N. Y.—*Improvement in Metallic Moulds for Casting Pumps.*—Patent dated March 25, 1862.—This invention consists in constructing the mould and in combining the core for the barrel and those for the passages in such a way that they will all draw together for the purpose of making the barrels and passages of double-acting pumps together in a single piece. The slide is worked by a pinion on a shaft that projects through the end of the mould. After casting, and previous to separating the mould,

the shaft is turned by a wrench on its outer end, and, by means of a pinion and rack on the slide, the latter is withdrawn into the central core.

Claim.—In the manufacture of double-acting pumps, the employment of a metallic mould composed of the plates or sections z and i, cores *a* and *b*, and the core or outer shell of the mould *d*, constructed and arranged substantially as described.

Also, the slide *m*, for the purpose set forth, when used in combination with a metallic mould for casting pumps.

No. 34,775.—J. W. RICKER, of Boston, Mass.—*Improvement in Corn Shellers.*—Patent dated March 25, 1862.—The movable presser plate fits loosely on a tubular bearing, in which the shaft of the shelling wheel runs. To the centre board are secured slotted tubes, within which fit loosely pistons or rods, one end bearing against the back of the presser plate, the other ends being in contact with followers in the slotted tubes. The followers are caused to move forward by means of weights attached to cords over pulleys, thus pressing the plate towards the shelling wheel. The face of the wheel is formed of alternate raised and depressed surfaces, studded with teeth.

Claim.—The combination and arrangement of the presser plate with the pistons, slotted guide tubes, follower, and weights, all acting together, substantially as set forth.

Also, the formation of the surface of the shelling wheel in alternate depressions and elevations, both studded with teeth, as shown and described.

No. 34,776.—L. C. RODIER, of Springfield, Mass.—*Improvement in Magazine Fire-arms.*—Patent dated March 25, 1862.—In this fire-arm, metallic cartridges are used, which act as a packing to the joint in the breech chamber. The claim and engraving explain the other parts of this invention.

Claim.—First, a fire-arm in which the breech chamber is divided longitudinally throughout a portion of its length at or near the centre of the bore, and the two parts hinged together at a point forward of the said division in the chamber when the two parts are so proportioned to each other and to the cartridge used that the cartridge shell shall extend forward of the forward end of this division, or joint, a sufficient distance to allow the shell to serve as a packing to the joint; the whole being arranged substantially for the purpose specified.

Second, the movable breech piece E, when used in combination with a breech chamber constructed as described, for the purpose of allowing the shell to be moved by the piece C, in the manner substantially as set forth.

Third, the ring or ferule F in combination with the breech piece E, for confining it in its place, when operating substantially as described.

Fourth, the combination of the movable wedge-shaped breech piece with the magazine G, having a spring for forcing out the cartridges contained therein, when said magazine is situated with relation to the bore of the breech chamber in such manner that the forward end of the magazine is a continuation of the bore of the chamber, so that the force of the spring in the magazine throws the cartridge directly into the bore of the chamber without the interven tion of other device.

No. 34,777.—E. A. G. ROULSTONE, of Roxbury, Mass.—*Improvement in Passing Boxes*—Patent dated March 25, 1862.—The inner and outer layers are made of sheets of thin leather; the central layer is made from a sheet of papier-mache or other suitable stiffening material. The manner of connecting the parts is shown in the engraving.

Claim.—Making a passing, or other similar box, of the three separate layers of material as described, and bringing the side edges together so as to unite them by one seam, as set forth.

Also, constructing the cover C with the piece composed of a block of wood *n*, or its equivalent, covered by leather *q*, and its upper covering *p*, they being connected to the top, as described.

No. 34,778.—JOHN RUSH, of Philadelphia, Pa.—*Improvement in Knapsacks.*—Patent dated March 25, 1862.—The frame of the knapsack is made of two parts, hinged together. At the thick end of one part are pivoted two arms, which, when thrown out, rest upon the edge of the knapsack, and serve to hold the canvas for forming a bed.

Claim.—The combination of the arms G G and sheeting K, either with or without the arms M M, for the purpose of forming a bed of the knapsack, as described.

No. 34,779.—GELSTON SANFORD and J. E. MALLORY, of New York, N. Y.—*Improvement in Machinery for Breaking Flax and Hemp.*—Patent dated March 25, 1862.—In this machine the flax is presented to the cylinder at right angles to the length of the stalk, and is so acted upon that the fibre is effectually broken and cleaned. The large cylinder is provided with two series of grooves; into the smaller series the feeding cords, passing over the grooved cylinders *g* and *h*, serve to hold the flax upon the cylinder, where it is acted upon by two sets of bent beaters standing upon the large grooves. The beaters are attached to rocks shafts, which are caused to move by limbs upon a rotating wheel, striking against arms attached to the shafts.

Claim.—The combination of the series of feeding cords, or the equivalent thereof, a grooved surface, or the equivalent thereof, and beaters, substantially as and for the purpose described.

No. 34,780.—J. B. SACKET, of Lawton, Mich.—*Improvement in Machines for Dressing Millstones.*—Patent dated March 25, 1862.—The pick handles work independently of each other, and are provided at their outer ends with screw-threads, upon which are placed clamps, between which, by means of nuts, are secured the picks, so that they may be separately adjusted as required. The sliding cylinder is provided with pins placed around its surface in spiral form, for operating the picks, and is also encompassed by a cog wheel, one-half of which is double the width of the other half, for the purpose of giving the picks an intermittent motion. Two cylinders E E′ are provided with pulley blocks, connected by a cord, and, in connexion with gear wheels, cause the carriage bearing the picker cylinder to traverse forward and back. Thumb screws are made to tighten or loosen the cord which connects the pulley blocks.

Claim.—First, the picks *a a*, clamps *a′ a′*, nuts *c c* and *d d*, and pick handles *b b*, when all shall be constructed and arranged substantially as and for the purpose set forth.

Second, the employment of the sliding cylinder C, when provided with pins *i i i*, in combination with cog wheel D, substantially as described.

Third, the cylinder E′, when supported in the adjustable bearing described, in combination with thumb screws *r r*, for the purpose set forth.

No. 34,781.—GELSTON SANFORD and J. E. MALLORY, of New York, N. Y.—*Improvement in Machines for Scutching Flax and Hemp.*—Patent dated March 25, 1862.—In this device the flax is bent alternately in opposite directions by the action of the scutching bars, and thus all woody matter and other foreign matter are separated from it.

Claim.—Arranging two series of scutching bars on two sets of hubs and arms, or on two sets of heads or wheels, as the equivalent thereof, the two series being geared to rotate in opposite directions and with equal velocity, and set so near that the bars constituting each series shall, in the rotation, pass in the spaces between the bars constituting the other series, and near to the axis of rotation, as described and for the purpose set forth.

No. 34,782.—JAMES SANGSTER, of Buffalo, N. Y.—*Improvement in Lamps.*—Patent dated March 25, 1862.—The claim and engravings explain the nature of this invention.

Claim.—The described lamp burners constructed as represented, to wit: With the cone K, corrugated around its upper aperture, and terminating in points at its lower extremity, the flange A, and the wick tube B, provided with gutters at its top and having its edges bent together, as described; the several parts being constructed and arranged together for forming a lamp burner, as is fully set forth.

No. 34,783.—C. B. SAWYER, of Fitchburg, Mass.—*Improvement in Hot-Air Registers.*—Patent dated March 25, 1862.—An upright cylindrical flanch or partition is secured within the register, so that, in connexion with the sides of the register, it forms a water chamber through which the hot-air pipe passes.

Claim.—Combining a water chamber with a hot-air register in such a manner that the hot-air pipe shall pass through the water chamber, substantially as set forth.

No. 34,784.—A. G. SEARLS, of Cleveland, Ohio.—*Improvement in Churns.*—Patent dated March 25, 1862.—By the action of the beater the cream is not carried around, but is forced into the corners and against the sides alternately, thus producing friction and accelerating the formation of butter.

Claim.—The attachment of the beaters C C to a revolving disk or cover B, in combination with a square casing A, as and for the purpose described.

No. 34,785.—W. H. SEYMOUR, of West Hartford, Conn.—*Improvement in Heaters.*—Patent dated March 25, 1862.—The fire box is surrounded by a series of hot-air and water chambers, each of which is provided with flange radiators. The wedge-shaped projections connecting the water space with the exterior surface of the fire pot, together with the flange, air, and water radiators, are designed to keep the fire pot below red heat.

Claim.—First, the combination of the water belt D, figure 1, and its connecting points F, with the air space C, extending from the fire pot A to the said water belt, substantially as represented, and for the uses set forth.

Second, the combination of the flange radiators E, figure 1, projecting from the water belt D into the air space C, with the flange radiators B projecting from the fire pot A, substantially as and for the purposes represented.

Third, the peculiar construction and arrangement of the upper section of the device represented in figures 7 and 10, including its pipes J K and N, and its caps L and M, substantially as and for the purposes specified.

No. 34,786.—S. B. SKIFF, of New Bedford, Mass.—*Improved Vise for Holding and Swaging Horseshoes.*—Patent dated March 25, 1862.—The nature and object of this invention are explained by the engraving and claim.

Claim.—A hinge vise A′ B′, with the movable and adjustable dies G′ G′ affixed to the jaws J′ J′, on which to form the calks of shoes, the treadle D′, and friction wheel E′, constructed and operating substantially as and for the purpose set forth and described.

No. 34,787.—JOSEPH SLOCUM, of Syracuse, N. Y.—*Improvement in Potato Diggers.*—Patent dated March 25, 1862.—The share is formed with double concave sides, and a projecting edge in front, the rear being provided with a series of parallel rods, and is attached to the front inclined part of the standard, by which means the potatoes are taken from the ground and separated from the earth. Horizontal and vertical bars are so fitted to the front bearing bar and wheels, as to admit of a ready adjustment as to height and width.

Claim.—The combination of the standard C with the undulating or double-concave removable share H, and rods, arranged and operating in connexion with the adjustable plates F, bars E, and bar D′, as and for the purposes shown and described.

No. 34,788.—C. W. SMITH and T. D. STETSON, of New York, N. Y.—*Improvement in the Plungers of Concussion Shells.*—Patent dated March 25, 1862.—The object of this invention is to cause the shell to explode at the right moment, avoiding the liability to premature discharge.

Claim.—The use of soft material, such as lead or its equivalent, in the percussive mechanism of shells, substantially in the manner and so as to produce the effect set forth.

No. 34,789.—CARLOS STEBBINS, of Pike, N. Y.—*Improvement in Sewing Machines.*—Patent dated March 25, 1862.—The toggle joint is so arranged that after the complete downward movement of the needle, the former is carried a little way beyond the straight position, which causes the needle to rise a short distance for the passage of the shuttle between the thread and needle. In coming back to the straight position, the toggle depresses the needle again, preparatory to its withdrawal, which is effected by the greater movement of the toggle in the opposite direction.

Claim.—First, obtaining the movement of the needle of a sewing machine from a crank or its equivalent through the agency of a pitman and toggle joint e, applied and arranged in combination with the said crank or equivalent, to operate substantially as specified.

Second, transmitting motion from the crank A or its equivalent to the vibrating feed bar K′, by means of a system of levers C G H M O and connexions and slide X, arranged, applied, and operating substantially as set forth.

No. 34,790.—J. H. STEVENS, of East Durham, N. Y.—*Improvement in Machines for Spreading Manure.*—Patent dated March 25, 1862.—This invention consists in the employment of an endless flexible belt for the bottom or flooring of a wagon body, and arranging in connexion therewith a series of buckets and a conducting tube, whereby the wagon as it proceeds, is made to deposit the manure upon the field in hills or in drills, as desired.

Claim.—First, the arrangement of the endless flexible bed C, windlass shaft J, and its connexions, in combination with the buckets D, spring *f*, and conducting tubes G H I, the whole combined and operating in the manner and for the purpose described.

Second, the arrangement of the endless flexible bed C, rollers B B, sides A, conducting tubes G H I, and framing F, the whole supported upon wheels and operating in the manner and for the purpose described.

No. 34,791.—C. A. STEVENS and J. V. ROCKWELL, of New York, N. Y.—*Improvement in Portable Stoves.*—Patent dated March 25, 1862.—The back and side plates are connected by joints to the top plate, and the doors are similarly connected to the side plates to admit of being folded flat together when not in use, and readily adjusted for use when required.

Claim.—The combination of the top plate A, furnished with holes and having covers attached to the plate, as shown, with the side plates C C, back plate B, and doors D D, the whole constructed and hinged together to make a folding stove, substantially as set forth.

No. 34,792.—M. L. and O. A. STRAY, of Willoughby, Ohio.—*Improvement in Fruit Baskets.*—Patent dated March 25, 1862.—Across the perforated cover is secured a slat which extends beyond the edges, and turning under inclined strips secures the cover to the basket.

Claim.—The combination of the perforated cover and basket when the same are constructed and secured together, as and for the purpose specified.

No. 34,793.—F. G. L. STRUVE, of Jefferson, Wis.—*Improvement in Feed Racks.*—Patent dated March 25, 1862.—This invention is designed to save the seed and finer leaves and prevent the fine particles of hay from getting into the wool of the sheep. The hay is first placed upon the rack in its lower position, the seed, &c., falling into the box below. The rack is raised when the hay is consumed and suspended on hooks, thus giving the animal access to the box to eat the seed and fine hay.

Claim.—The arrangement of the notched arms D D′ or their equivalents in combination with the movable rack or racks A A′, constructed and operating substantially in the manner and for the purpose shown and described.

No. 34,794.—DAVID TANQUARY, of Carmi, Ill.—*Improvement in Stump Extractors.*—Patent dated March 25, 1862.—The sweep or lever is made to turn a ratchet wheel which has a prolonged axis passing through the sweep, confined by a nut, through which a screw rod passes. The revolution of the sweep raises the rod, to the lower end of which a stump may be attached.

Claim.—The application, combination, and arrangement of the sweep G, the hook E, the spring F, the nut as seen in Fig. 3, and the rod I, constructed as described and operating as and for the purposes substantially as set forth.

No. 34,795.—L. H. THOMAS, M. D., of Waterbury, Vt.—*Improved Clothes Wringer.*—Patent dated March 25, 1862.—The spring is secured to the under part of the top of the frame, its free ends resting upon the rounded parts of the block below, for the purpose of allowing an easy and regular adjustment to the upper roller.

Claim.—The shape and construction of the self-adjusting block K and spring N, combined as described, as and for the purpose specified.

No. 34,796.—G. W. WALKER, of Boston, Mass.—*Improvement in Stoves.*—Patent dated March 25, 1862.—The engraving and claim explain the nature and object of this invention.

Claim.—A stove made or furnished with a discharging spout or conduit, or its equivalent, and a rake-receiving passage leading from its ash chamber, substantially as described, whereby ashes may be raked or discharged from the said ash chamber into a covered pail constructed with an ash-receiving hole or induction pipe to communicate with the ash chamber through the discharging opening or spout thereof, as explained.

No. 34,797.—MAXIMILIAN WAPPICH, of Sacramento, Cal.—*Improved Apparatus for Shipping Spare Rudders.*—Patent dated March 25, 1862.—Braces and steps, besides those used for sustaining the rudder, are attached to the rudder post of a vessel, so that in case the rudder is broken off from its fastenings a new rudder can be shipped in the reserve steps attached to the post. In this way any inconvenience arising from injuries to the rudder or rudder fastenings can be remedied without docking the vessel. The metal gudgeon attached to the top of the shaft of the rudder, revolves in a brass top which is fixed in a bar attached to the rudder frame. This bar is supported by springs, thus avoiding injury to the rudder arising from jars and shocks. The vertical pins are provided with friction rollers, by which means the lips of the rudder yoke are made to bear upon these pins with less friction than ordinarily is the case. The tong W, which is used in shipping the rudder, supports its lower end, and projects far enough beyond the rudder to play on the rudder post. This tong is held in a horizontal position by allowing its arms to rest upon pins upon the sides of the rudder, which pins, after the rudder is shipped, can be drawn out, and the tong can then be removed.

Claim.—Providing the sterns of vessels and their rudders with reserve braces, pintles, and steps, substantially in the manner and for the purpose set forth.

Also, a rudder having a metal bearing E, in combination with a cross-bar L, springs M and M′, encircling boxes K, substantially in the manner and for the purpose specified.

Also, the rudder yoke O, having lips V in combination with the vortical pins T and cylinders U, the whole arranged and operating substantially in the manner and for the purpose set forth.

Also, for shipping and unshipping vessel rudders, the application of a shipping tong W, substantially in the manner and for the purpose described.

No. 34,798.—M. S. WECKERSHAM, of Philadelphia, Pa.—*Improvement in Explosive Shells for Ordnance.*—Patent dated March 25, 1862.—The object of this invention is to cause a disruption of the shell at many points or in many lines, instead of at a few points, as in shells with interior surfaces of regular form.

Claim.—The construction or manufacture of explosive shells with their interior surfaces grooved, furrowed, corrugated, or otherwise indented, substantially as and for the purpose specified.

No. 34,799.—ABEL WILSON, of Frankford, Pa.—*Improvement in Soldering Irons.*—Patent dated March 25, 1862.—The jaws are concave on the inside, so as to fit the convex edges of the shank, and their exterior is made tapering, to fit the inside of the ferule. Upon the threaded portion of the stem is a nut, between which and the smaller end of the ferule is a washer, so that in turning the nut the ferule will be forced over the tapering jaws, firmly grasping the shank of the copper bar, by which means the bar can be readily tightened when it becomes loose, and easily attached and detached.

Claim.—The tapering jaws B and B′, adapted to receive the tapering shank *d* of the copper bar, and secured to or forming a part of the stem A, in combination with the tapering ferule G and the nut H, or its equivalent, the whole being constructed and arranged substantially as and for the purpose set forth.

No. 34,800.—A. B. WILSON, of Waterbury, Conn.—*Improvement in Photographic Cameras.*—Patent dated March 25, 1862.—The holder for the negative glass and the bath is made of hard rubber. An adjustable crooked stem funnel, inserted from the outside of the box, fits into a hollow journal, which serves to keep out light and admits of the nitrate of silver, &c.,

being poured in as well as out. The holder of the focus and negative glasses is placed on bearings in the sides of the box, and made to turn up or down by a key on the outside—the object of the invention being to provide a means for dispensing with the necessity of removing the negative from the camera to and from a dark room or place, for immersion in the bath.

Claim.—First, a negative plate and bath holder having a hollow journal, channel and throat, constructed and operating substantially as and for the purposes described.

Second, the hollow journal described for introducing and withdrawing the baths.

Third, the combination of a negative plate and bath holder, having a hollow journal, channel and throat, as one instrument, with the crooked stem funnel, constructed and operating substantially as described.

Fourth, giving the combined negative plate and bath holder the capacity of assuming horizontal and perpendicular positions at will, in the manner and for the purposes described.

Fifth, the combination of camera-box, crooked stem funnel, hollow journal, channel and throat, and fluid-tight holder, substantially as described.

No. 34,801.—E. F. WOODWARD, of Brooklyn, N. Y.—*Improvement in Coffee Boilers.*—Patent dated March 25, 1862.—The bottom of the boiler consists of a coiled tube commencing at the periphery where it opens into the upper plate and terminating at the centre, when it extends up vertically a short distance. Over this extension is fitted a perforated receiver of inverted conical or other shape, for holding the coffee, and on the under side of the cover is a perforated cone, resting upon the top of the receiver, which serves to prevent its rising, and conducts the heat to a supplementary boiler above. Heat under the boiler causes a circulation down through the tube and up through the coffee.

Claim.—Causing a circulation by means of a tubular or channel-formed bottom, as set forth.

Also, forming the tubular bottom by means of one or two corrugated plates, as specified.

Also, in combination with the circulating apparatus, the receiver specified.

Also, the cone *c*, or its equivalent, for conveying heat to the upper reservoir *d*, as described.

No. 34,802.—WILLIAM BOYERS, assignor to J. L. LIVINGSTON and J. B. SHAFFER, of Mount Carroll, Ill.—*Improved Rotating Clothes-Dryer.*—Patent dated March 25, 1862.—The pulleys and endless cord are designed to be so arranged that a person may place the clothes upon and remove them from the line while standing at a door or window. The grooves in the pulleys are for the purpose of raising up the line when depressed by the weight of the clothes or by the slacking of the cord.

Claim.—The combination of the spiral grooved, bell-shaped, flanged pulleys, attached by braced projections to a building, or placed upon three or more posts in connexion with the endless cord, all arranged substantially as and for the purpose specified.

No. 34,803.—C. R. ALSOP, of Middletown, Conn., assignor to J. W. ALSOP, of New York, N. Y.—*Improvement in Revolving Fire-arms.*—Patent dated March 25, 1862.—A fixed brace or abutment is rigidly secured within the stock frame, in the rear of the shaft of the rotating recoil shield, for the purpose of constructing a bearing for the wedge by which the cylinder is forced up toward the barrel before firing, the wedge being arranged to work between the brace and rear end of the recoil shield, and is attached at its head by a pin to a lever which operates the wedge; the object being to secure a perfectly tight joint between the chamber and cylinder while firing.

Claim.—The arrangement of a wedge H, with the rear of the recoil shield shaft F, and stationary abutment or bearing G, substantially as shown and described, for the purposes set forth.

No. 34,804.—S. T. HOLLY, assignor to MARY MANNY, of Rockford, Ill.—*Improvement in Harvesters.*—Patent dated March 25, 1862.—The improvements under this invention are designed to be applied to a "Manny Combined Ha vesting Machine." The nature and object of the invention, which does not admit of a brief description, are expressed by the claim.

Claim.—The combination of a caster wheel, with a tongue in advance of it, and with the part of the machine that is behind it, by means of a compound spindle box fitted with lateral trunnions, and with fastenings for the tongue, the combination as a whole being substantially as described.

Also, the combination of the cutter-frame of a harvester, the hinged part of the machine which precedes it, a thrust bar jointed to one portion of the machine, and an elevated driver's seat and standard secured to the other portion of the machine in such manner that the driver can exert the muscular force of both his leg and arm in elevating the finger beam, substantially as set forth.

Also, the combination of the thrust bar with a rack and spring catch, the former being secured to the thrust bar, and the latter being connected with the standard to which the attendant's hand is applied when the finger beam is to be raised or lowered, substantially as set forth.

Also, combining the driver's seat with the frame of the machine, by means of the frame of the rake mechanism, so that this last frame performs two functions, substantially as described.

Also, the combination of the main gathering arm of a rake with a crank that moves in a horizontal plane or thereabouts, and with a rake crane having a cam plate that is horizontal or thereabouts; the combination as a whole being and operating substantially as described.

Also, the combination of the projecting end of the secondary gathering arm of the rake with an arm of the crane that is at the same side of the crane axis, by means of a radius bar pivoted to the arm between the axis thereof and the main gathering arm of the rake, substantially as described.

Also, the combination of the palm with the part of the rake mechanism that supports it, by means of a joint located at or near the lower edge of the palm, and a spring that causes the palm to turn upon this lower joint, substantially as described.

Also, the combination of an intermediate cog-wheel shaft of the rake mechanism with an oscillating box operated by a lever, substantially as described.

No. 34,805.—W. H. MATTHEWS, of Chelsea, Mass., assignor to WILLIAMS & Co., of Boston, Mass.—*Improved Lamp Shade Holder.*—Patent dated March 25, 1862.—The springs which hold the shade to the glass are so shaped as to act as a jaw in securing the shade to the holder, whereby an additional ring is dispensed with. One end of the holder ring is made to lap over the other, the ends being fastened by a slot and pin so as to enable the springs to be inserted in the upper part of the shade.

Claim.—The improved shade-holder as made with the contractile ring and with its springs provided with jaws *i*, so as to operate with such ring and against the paper shade, substantially as described.

Also, the arrangement and combination of the inner ring with the springs made with the jaws, as described, whereby the said springs and inner ring may be employed to hold the lamp shade to the outer or main ring.

No. 34,806.—B. L. BUDD, of New York, N. Y.—*Improvement in Shot Cartridges.*—Patent dated March 25, 1862.—The claim and engravings explain the nature of the invention.

Claim.—The method of forming fixed charges of shot so as to be capable of being used without wrappers or cases of any kind, by pouring among the shot while in a mould some easily fusible material, as grease, stearine, &c., which on cooling will fix the shot, and when discharged from the mould will retain said shot in the order and form they took in the mould, in the manner and for the purpose described.

Also, in combination with the above, the method of connecting the cut wads to the two ends of the charge by a leaden wire or rod, or other equivalent material, passing into or through the mass of shot, as described.

No. 34,807.—J. W. BARTLETT, of New York, N. Y.—*Improvement in Needle Gauge and Adjuster for Sewing Machines.*—Patent dated April 1, 1862.—This device is for the purpose of readily determining the size of the needle and adjusting it to the machine in use. The needle is inserted through the gauge plate to just above the eye; the point of the bent rod passes into the eye of the needle, the rod being adjusted to the right position by a set screw on the end of the bar.

Claim.—A needle gauge and adjuster combined, substantially as set forth.

No. 34,808.—HENRY BEHN, of New York, N. Y.—*Improvement in Machines for Splitting Kindling Wood.*—Patent dated April 1, 1862.—An adjustable support, which holds the wood to be split, projects through and hooks in a slot in the frame, being held in position by an arm resting in racks on the frame. At the top of the frame is hinged a lever provided on its under side with an eccentric knife, by which the wood is split.

Claim.—The arrangement of an eccentric chopping knife D, in combination with a movable support E, for the purpose of splitting kindling wood, when the whole is constructed and operating in the manner substantially as described.

No. 34,809.—DAVID BENNET, of Stratford, Conn.—*Improved Ice Shoe or Calk.*—Patent dated April 1, 1862.—A thin piece of metal turned up at the heel extends to the ball of the foot; upon this metal are riveted two cross-bars turned up at the ends to fit the width of the sole, and provided with sharp points; the plate is secured to the foot by straps.

Claim.—As an improved article of manufacture, an ice shoe or foot calk composed of a central longitudinal connecting bar *a*, and two-pointed rectangular cross-bars *b c*, united together and otherwise constructed and operating as shown and described.

No. 34,810.—ABEL BREAR, of Saugatuck, Conn.—*Improved Device for Raising Water by Steam.*—Patent dated April 1, 1862.—This apparatus consists principally of a steam pipe, the mouth of which enters and is surrounded by a socket, in which is an opening for the admission of water or other liquid to be raised from the well, reservoir, or other source of supply, and from which a delivery pipe leads to the point where it is to be delivered; the direction of the steam pipe being the same as that of the continuous portion of the delivery pipe. The force of the entering steam repels the water from the delivery pipe, and the place of the water so expelled, is supplied by water forced into the socket from the well by the pressure of the atmosphere.

Claim.—The combination of the steam or air pipe A, the open socket *c*, and the delivery pipe D, with the check valve F and the chamber G, the whole operating substantially as and for the purpose specified.

No. 34,811.—ABEL BREAR, of Saugatuck, Conn.—*Improved Mode of Discharging the Contents of Sugar Kettles and other Vessels.*—Patent dated April 1, 1862.—The claim and engravings explain the nature of this invention.

Claim.—The employment for the discharge of open kettles or vessels, used in boiling or evaporating processes, of a movable cover B and pipe C, the cover being so fitted to the rim of the kettle or vessel that by placing it thereon temporarily, the contents of the vessel may be expelled through the pipe by the steam generated within the kettle or vessel itself, substantially as specified.

No. 34,812.—H. P. BRIGGS, of Brookfield, Conn.—*Improved Washing Machine.*—Patent dated April 1, 1862.—The tub is secured to a bench. The bottom of the tub is provided with diverging ledges, over which is a disk with similar ledges attached to a spindle upon which the disk is made to semi-rotate by means of hinged levers connected by rods to a yoke on the upper part of the spindle. A spring over the yoke serves to press the disk upon the clothes.

Claim.—The arrangement of a tub with the ledges *d*, upon a form or bench *a*, in combination with the disk *s* and ledges *d'*, spring *m*, hinge levers *i i*, yoke *g*, and arms *k*, substantially in the manner as and for the purpose described.

No. 34,813.—T. H. BURGESS, of Boston, Mass.—*Improvement in Portable Sewing Work Cases.*—Patent dated April 1, 1862.—The case, which is made of metal, is divided into two compartments, one of which is designed to contain one or more spools upon a wire attached to each end of the compartment. The case is attached to a flexible flap which folds around it, on the inner side of which may be attached fixtures to hold scissors, thread, &c.

Claim.—The improved traveller's work case, or construction or arrangement of the rotary spool or spools, and their arbors, or its equivalent, the metallic case and the flexible flap provided with a scissors' sheath and needle leaves or other devices for sustaining articles useful for mending or making clothing.

No. 34,814.—T. M. BUSH, Hartland Township, Ohio.—*Improvement in Sawing Machines.*—Patent dated April 1, 1862.—This arrangement is designed for a cross-cut saw. The log rests in a socket upon the carriages and is held firm by an arm extending out from the frame, and having upon it a gripe; after the log passes the saw, a catch attached to the frame holds the log after the first cut. The levers hold the log steady and prevent it from falling immediately after having been cut. The saw moves in a hinged frame, so as to readily follow the cut through the log.

Claim.—The arrangement of the gripe binder A, dog B, the connected levers C and D, the hinged swing guide F, all operating together and in combination with the main frame and the log-feeding and saw-guiding and operating mechanism, in the manner and for the purpose substantially as described.

No. 34,815.—WILLIAM BUSH, of Wilmington, Del.—*Improvement in Tanning for Morocco and other Grain-finished Leather.*—Patent dated April 1, 1862.—A set of ten vats are used, in each of which a frame is hung upon a pivot in the centre. Across each frame are laid strips from which the skins are suspended. The frames are kept in constant motion by means of a pitman attached to a rock shaft, to which motion is given by any convenient power; the object being to dispense with sewing the skin into a bag and applying pressure, to prevent the drawing and wrinkling of the grain, which in this invention is designed to be effected by the weight of the skin.

Claim.—The application of the principle of tanning without sewing and pressure to the manufacture of goat, sheep, calf and other small skins into morocco and other grain-finished leather, by suspending the skins by the neck, forward shanks or otherwise, perpendicularly to a frame, which frame has a constant oscillating motion in a vat of tanning liquor, as described.

No. 34,816.—S. G. CLARKE, of Cleveland, Ohio.—*Improvement in Stills for Coal Oils.*—Patent dated April 1, 1862.—The steam retort is designed to receive the crude oil, which is admitted by a tube from the tank A. The flow of oil is regulated by a valve in the tube connected, by means of a rod and oscillating beam, with a float in the vessel B, by which means the oil in the retort is kept at a uniform height. Steam is admitted directly into the retort, and thus the more volatile portions of the oil are volatilized and pass off with the steam into a condenser. The remaining oil passes through a tube traversing the flue of the fire retort C, into said retort, which is constructed similarly to a single-flue steam boiler. Here the oil is distilled and the residuum is conducted by the tube I to the vat K, from which it flows into channels upon the bars of the fire-grate, and is there burned. By this arrangement a continuous distillation can be kept up without stopping the operation in order to remove the residuum from the retorts.

Claim.—First, the described combination of the steam retort B with the fire-heat retort G, arranged and operating as and for the purpose specified.

Second, the described devices for the continuous discharge of the residuum, and the burning of the same, as and for the purpose set forth.

No. 34,817.—CHARLES COALE, of New Brighton, Pa.—*Improved Japan Varnish.*—Patent dated April 1, 1862.—The ingredients of which this composition consists are linseed oil, gum shellac, red lead, sugar of lead, litharge, Turkey umber, and benzole.

Claim.—The described composition for Japan varnish, made of the ingredients specified, and mixed together in about the proportion as set forth.

No. 34,818.—G. J. COLBY, of Waterbury, Vt.—*Improvement in Fastening India-rubber Rolls to Metallic Shafts.*—Patent dated April 1, 1862.—This invention is explained by the claim.

Claim.—The application of a greater degree of heat to the shaft than was used in vulcanizing the rubber, and sufficient to slightly melt the rubber as the shaft is forced into it, thus forming a lubricator until the shaft is in place, and then by immediately cooling the melted rubber becomes a cement that unites the shaft and rubber firmly together.

No. 34,819.—G. H. DODGE, of Camden, N. J.—*Improvement in Pumps.*—Patent dated April 1, 1862.—The plungers consist of hollow cylinders, and are so connected to the piston rods, and provided with an internal and external valve, that the water can have an uninterrupted passage through the interior of the plungers. The plungers bear against one packing only, being free from contact with the interior of the barrels. The packing is tightened upon the plungers when necessary, by tightening the nuts of the bolts which connect the front and rear ends of the two barrels. Over the inlet pipe is a foot valve having a projection which rests against a metal disk on the end of a screw *w*, which passes through a hollow screw E, furnished on its outer end with a handle, the former having a longitudinal groove cut in it; the object of this arrangement being to allow the water to escape from the barrels when liable to freeze, the groove allowing access of the air to facilitate the passage of the water out.

Claim.—First, the upper and lower barrels with the communicating passage *c*, the branches *w* and *m*, and foot valve *n*, in combination with the hollow plunger D, and its valve *h*, and the hollow plunger D', and its valve *i*, the whole being constructed, arranged, and operating as and for the purpose set forth.

Second, the hollow plungers D and D', with their respective valves, and the packing pieces *f f*, when the latter are confined between the two portions of the barrels, as set forth, for the purpose specified.

Third, the grooved screw E, its metal disk or washer *t*, and packing washer *s*, in combination with the foot valve *n* and the projection *p*, the whole being arranged for joint action, substantially as and for the purpose specified.

No. 34,820.—ADAM DOMIS, of New York, N. Y.—*Improvement in Cartridge Box.*—Patent dated April 1, 1862.—This invention consists in the arrangement of a cylindrical revolving case provided with a series of chambers to receive cartridges, and furnished with a spring stop, in combination with an outlet opening, and with a series of recesses in its rim to receive the point of the spring stop, and to arrest the revolving case at the desired intervals, in such a manner that by revolving the inner case one cartridge chamber after another can be brought before the outlet opening in the outer cylinder to receive or discharge its cartridge, or that all the chambers can be brought in such a position as to be closed by the rim of the outer cylinder, and that the outer cartridges in the same are fully protected, the whole being conveniently carried in the pocket.

Claim.—The arrangement of the revolving case A, with chambers B, and spring stop *a*, in combination with the outer cylinder E, having a notched rim and an outlet opening *g*, substantially as and for the purpose shown and described.

No. 34,821.—LEWIS EIKENBERRY, of Philadelphia, Pa.—*Improvement in Variable Cut-off Valves.*—Patent dated April 1, 1862.—The valve mover is an eccentric, and is attached to the shaft of the fly-wheel of the engine. The shifter is a tube moving upon the shaft and fitting into an eye in the valve mover. The shifter is provided with an oblique longitudinal slot on one side and a straight longitudinal slot on the other. A movable cam having a fixed position longitudinally is attached to the valve mover in such a manner that, as the cam moves backward and forward upon the shifter, the sides of the wedges bearing against the movable piece D', force it out so as to change the configuration of the circumference of the valve mover. The shifter is attached to the governor of an engine so that the cut-off is regulated automatically by the working of the fly-wheel.

Claim.—First, the shifter C, constructed substantially as described, in combination with a cam, eccentric, or movable piece D', which has a fixed position longitudinally, whereby a greater or less circular movement in the cam, eccentric, or movable piece is produced, and at the same time the said cam, eccentric, or movable piece is held by the shifter at any desired point of adjustment on its shaft, as set forth.

Second, the movable piece D′, substantially as and for the purpose set forth.

Third, the combination with an engine governor of a movable piece D′, which has a fixed position longitudinally, as described, and also of the movable piece D′ and shifter *e*, combined, substantially as and for the purpose described.

No. 34,822.—LEWIS EISENBERRY, of Philadelphia, Pa.—*Improved Device for Operating Valves of Steam Engines.*—Patent dated April 1, 1862.—This invention consists in the combination with the valve or valves of a steam engine, of a valve mover, so formed as to operate the valves in such a manner that they may remain still, or have but a slight movement for a portion or the whole effective stroke of the piston, after the steam has been admitted and cut off, and at the same time the exhaust at the opposite end of the cylinder remains open during any portion or the whole of the effective stroke of the piston, as circumstances may require.

Claim.—The devices, substantially as specified, for producing the results set forth.

No. 34,823.—J. P. EVANS, of Hazleton, Pa.—*Improvement in Steam Boilers.*—Patent dated April 1, 1862.—A series of tubular bars of elliptical or similar form in their transverse section, is combined with a series of alternately interposed tubular or solid bars of round form. The elliptical bars, by exposing a great portion of their surface to lateral contact with the fire, cause a more rapid generation of steam. Within and at the ends and sides of the fire-box are arranged bent pipes of elliptical or flattened tranverse section, connected each at one end with the upper part of the water space surrounding the fire-box, and at the other end with a lower portion of said water space, so that they are exposed to the heat of the fuel and of the flame and heated gases, thus causing a rapid generation of steam, and also a rapid upward circulation of water to prevent overheating.

Claim.—First, having the fire-grate made with an alternate arrangement of large elliptical tubes and small cylindrical tubes or bars, in the manner and for the purpose shown and described.

Second, the arrangement of the elliptical pipes D and connecting pipes E with each other and with the boiler A, as shown and described.

No. 34,824.—JACOB FELSING, of Granville, Wis.—*Improvement in Grain Separators.*—Patent dated April 1, 1862.—The pitman may be connected to the sieve frame at a point to or further from the end, or it may be attached to the large or small cog-wheel, for the purpose of imparting a more or less rapid motion to the sieve.

Claim.—The arrangement of the pitman as connected with the sieve frame at the points L or K, and the wheels E B, for the purpose of imparting a more or less rapid movement to the sieves, constructed and operating substantially as set forth.

No. 34,825.—J. MCAULAY GALLAGHER, of Roxbury, Mass.—*Improved Fertilizing Composition.*—Patent dated April 1, 1862.—The liquid animal matter forming an ingredient of this composition is obtained by condensing the gases and vapors rising or expelled during the process of charring or burning the bones.

Claim.—The described fertilizing composition made of animal charcoal, sulphuric acid, and liquid animal matter, substantially as set forth.

No. 34,826.—WILLIAM GEE, of New York, N. Y.—*Improved Soda Water Apparatus.*—Patent dated April 1, 1862.—The inlet and outlet pipes above the cylinder being closed by valves, water is forced into the cylinder by the pump to a height indicated by a discharge valve. The gas is then passed into the cylinder, and impregnates the water, when it can be drawn off as desired, and the operation of filling the cylinder with water and impregnating the same with gas may be repeated as often as required.

Claim.—The application and use of a pump, for the purpose described, when used in combination with a cylinder having connected therewith the described pipes and valves, substantially as described and arranged, so that when the whole combination, on being operated, I am enabled thereby to supply and gauge the quantity and gas required within the cylinder, for the purpose set forth and described.

No. 34,827.—WILLIAM GIBB and R. J. BELL, of Carlisle, Pa.—*Improved Clothes-Wringer.*—Patent dated April 1, 1862.—The parts are so constructed and arranged that an increase of pressure between the rollers is always accompanied by a tightening of the clamp, thus avoiding the danger of forcing the machine from its hold upon the tub in heavy work.

Claim.—Attaching together the frames of a clothes-wringer by an adjustable box strap-hinge joint, whereby they may be adjusted to fit tubs or other suitable supports of different thicknesses, and to clamp the same with a degree of pressure regulated by and corresponding with that of the rollers on the clothes, substantially as described.

No. 34,828.—JOHN GROSS, of Manilla, Ind.—*Improvement in Cultivators.*—Patent dated April 1, 1862.—A pendant upon the end of the guide-bar is so adjusted that it may be at the same distance from the end points as the points are apart. When the machine is drawn back over the field, the driver places the end point in the mark drawn by the bar upon the guide-rod. The operation of the other parts of the machine will be seen from the engraving.

Claim.—The lever frame B, with levers C and adjustable points D, when operated in connexion with the frame A, with the guide bar F, and rollers I I, by means of the standards E, the whole being arranged and operated as set forth.

No. 34,829.—H. C. GLASGOW, of Chicago, Ill.—*Improvement in Brakesmen's Cab.*—Patent dated April 1, 1862.—This invention consists of a frame so constructed and arranged as to be readily attached to the top of a freight car when required, and folded in a small compass when not in use; the object being to protect the brakesman from wind and storm.

Claim.—The brakesman's cab, when constructed substantially in the manner and for the purposes set forth.

No. 34,830.—M. T. GLIMSDAL, of Madison, Wis.—*Improvement in Seeding Machines.*—Patent dated April 1, 1862.—The bottom of the seed box is formed of a series of transverse perforated plates and blocks placed alternately, the upper surface of the blocks inclining downward each side. Below the bottom of the box is a shaft whose journals slide in their bearings, and are provided with holes made circumferentially in rows, the holes of the several rows differing in size adapted to the kind of seed to be passed from the hopper. A shaft made adjustable as to height, is provided with wire or rods passing over each plate, to agitate the seed and prevent clogging. To the back part of the frame is attached a draught rod connected by a pin to a draw-head at the front end of a rectangular frame which carries a roller formed in two parts, for the purpose stated in the claim.

Claim.—First, the combination of the plates *a* and blocks *b*, fitted in the seed box H, as shown in connexion with the rotating shaft M, provided with loose transverse rods *n**, and placed within the seed box H, and the adjustable rotating seed-distributing shaft J, provided with a series of circumferential rows of holes, 1 2 3, all arranged for joint operation, as set forth.

Second, attaching the roller E′ to the frame A, by means of the draught rod B′, pin *o*′ and draw-head C′, as shown, for the purpose of allowing the roller an adjusting movement independent of the frame A, as specified.

No. 34,831.—A. J. GIBSON, of Worcester, Mass.—*Improvement in Burners for Coal-Oil Lamps.*—Patent dated April 1, 1862.—The flange upon the base of the chimney fits between the plate and the elastic removable plates; the other flange fits into a hook *c* upon the cone. Underneath the arm D the plate F is fastened by a rivet so that it can be moved in a horizontal plane. When this plate is in position, it attaches the cone to the burner, to allow the free expansion of the glass and the ready removal of the cone and chimney from the burner.

Claim.—The removable cone C, provided with the hooks *c c* and arm D, in combination with the elastic adjustable plates E F, attached to the arm and arranged in relation with each other, and respectively with the chimney and burner A, substantially as and for the purpose set forth.

No. 34,832.—JOEL HAAG and J. C. SMITH, of Bernville, Pa.—*Improved Water-Wheel.*—Patent dated April 1, 1862.—The spiral water-way is so constructed as to have a large inlet opening leading from the reservoir, and gradually diminishing in width to the wheel which is placed upon and concentrically with the spiral water-way, so that the greatest possible quantity of water is made to act upon the wheel and still retain a spiral motion.

Claim.—First, the employment of the spiral water-way contracting in two directions as it approaches the wheel, as and for the purpose set forth.

Second, the use of the buckets being of a concave spiral form gradually diminishing in width from their lower to their upper ends, and having semicircular formed bottoms and flat tops, so formed that the water is easily and quickly discharged, as and for the purpose specified.

No. 34,833.—JOHN HOLMES, of Boston, Mass.—*Improved Ball Furniture Caster.*—Patent dated April 1, 1862.—The bearing rollers revolve on journals or axes in an interior case, arranged in radial directions with reference to a common centre placed in the vertical axis of the caster, so as not to bear against the top of the inner case.

Claim.—The improved ball caster, as made with the two cases A C, arranged with the ball and the bearing rollers and the axis of the latter, substantially as described.

No. 34,834.—P. H. JACKSON, of New York, N. Y.—*Improved Vertical Windlass.*—Patent dated April 1, 1862.—The wheel gears with a pinion attached to an ordinary capstan; the chain barrel on the elongated hub can be disconnected from the capstan head by means of a rod passing through the capstan and fitting sockets in the face of the chain barrel.

Claim.—The employment of the elongated hub 2, of the wheel *b*, to receive the capstan head *g*, in combination with the chain barrel *f*, fitted to rotate on the said hub between the capstan and wheel, and connected to or disconnected from said capstan, substantially as specified.

No. 34,835.—PHINEAS JONES, of Newark, N. J.—*Improvement in Dowelling.*—Patent dated April 1, 1862.—This device is designed to connect the ends of pieces of wood that abut against each other, avoiding the liability of splitting by lateral strain and dispensing with pins or bolts to hold the dowel in place, being more particularly adapted to connect the ends of felloes of a wheel.

Claim.—First, a dowel B, formed of a metal tube fitted in annular recesses *b b* in the parts to be connected, substantially as set forth.

Second, having the interior of the metal dowel B of variable diameter or of double taper or conical form, in combination with the wedge C, for the purpose of locking the cores *c c* in the dowel, as described.

No. 34,836.—T. B. JONES, of Paterson, N. J.—*Improvement in Tenoning Machines.*—Patent dated April 1, 1862.—This invention consists of a bed piece with two uprights supporting a frame which is moved up and down by means of a lever. To this frame are attached five cutting instruments; on the face of the frame nearest the bed piece are attached two knives at right angles to the bed piece and separated by a V-shaped opening below and a parallel slot above. At the place where the knives are parallel, two chisels cutting in the direction of the grain of the wood are placed, and also a knife cutting across the grain so as to trim off the ends of the tenon.

Claim.—The peculiar arrangement of knives and chisels, as shown and described, when operated in the manner and for the purpose specified.

No. 34,837.—MORTON JUDD, of New Briton, Conn.—*Improved Screw Support for Hanging Pictures.*—Patent dated April 1, 1862.—The claim and engravings explain the nature of this invention.

Claim.—The conical base *d*, in combination with the cord retaining button *e* and screw *a*, forming a stud for hanging pictures and other articles, as set forth.

No. 34,838.—J. P. KETTELL, of Worcester, Mass.—*Improvement in Hat-shell Irons.*—Patent dated April 1, 1862.—This iron is so constructed as to iron the brim of a hat without taking out the curl.

Claim.—A hat-shell iron constructed substantially as described.

No. 34,839.—J. J. KIMBALL, of Napierville, Ill.—*Improved Water-Wheel.*—Patent dated April 1, 1862.—The water strikes against the upper set of buckets, and is conducted into the centre of the wheel, whence by centrifugal force, it is thrown into the lower set of buckets, so as to cause them to revolve, being set in an opposite direction to the upper buckets. The flow of water can be regulated by means of an annular gate. The rods are connected with a head, to which is attached a rod in connexion with the lever; this rod is provided at its lower extremity with a shoulder, so that it is allowed a swivelling motion on the head, by which means the gate can be raised without stopping the wheel.

Claim.—The wheel D, provided with two sets of buckets *a b*, one set *b* being below the bottom of the penstock A, and the top of the wheel fitted in the bottom of a box E in the penstock, in combination with the annular gate F, placed in the lower part of the wheel encompassing the buckets *b*, and connected with the adjusting lever K, by the rods *f* H *h*, and lever G, all arranged substantially as and for the purpose set forth.

No. 34,840.—NATHANIEL LLOYD and J. G. DALE, of Church, near Accrington, England.—*Improvement in Dyeing and Printing with Aniline Colors.*—Patent dated April 1, 1862.—The claim sufficiently explains the nature of this invention.

Claim.—The use of tannin and tartarized or other soluble salt of antimony capable of dilution with water, or a soluble salt of lead, mercury, or chromium, substantially as described, for the purpose of fixing colors derived from aniline or analogous substances upon textile materials or fabrics.

No. 34,841.—WILLIAM MOREHOUSE, of Buffalo, N. Y.—*Improvement in Lamps for Burning Coal-Oil.*—Patent dated April 1, 1862.—The claim and engraving explain the nature of this invention.

Claim.—The arrangement and combination of the heater plates *c c*, attached to and near the base of the cone A, with the tube K, cone A, burner B, and globe *i*, in the manner and for the purpose set forth.

No. 34,842.—WILLIAM MOREHOUSE, of Buffalo, N. Y.—*Improved Mode of Attaching Chimneys to Lamps.*—Patent dated April 1, 1862.—The upper part of the cone is made with a shoulder, on which the flange on the base of the chimney rests. This flange is inserted under spring hooks, and provided with a recess, which, after one side of the base has been inserted under the hooks, allows it to pass a retainer which is attached to the cone, and presses on the flange of the chimney.

Claim.—A lamp chimney or globe having a part of its base or flanch so reduced in diameter as to permit the chimney or globe to be set upon and secured to or removed from the lamp

cap, without causing or requiring a lateral displacement of any of the parts which hold the chimney or the globe to the said cap, substantially as described.

No. 34,843.—VALENTINE MOTT, of Roslyn, N. Y.—*Improved Washing Machine.*—Patent dated April 1, 1862.—The shaft of the large fluted roller rests on spring bearings, so that it will press equally on any quantity of clothes between it and the inclined tapering rollers. The rotation of the large roller produces a rotation of the tub on the upright shaft forming its axis, so that all the clothes are brought in succession under the rollers.

Claim.—The conical fluted roller *k*, fitted as specified, in combination with the revolving tub *b*, containing the conical surface formed by the inclined tapering rollers, the parts being fitted and acting substantially as and for the purposes specified.

No. 34,844.—PETER NAYLOR, of New York, N. Y.—*Improvement in Machines for Compressing Musket Balls.*—Patent dated April 1, 1862.—This invention consists in an arrangement of dies for compressing and delivering balls, either globular, elongated, or hollow; said balls being made from short sections of lead or suitable metal cut off from a bar and presented successively to the action of the dies. The delivery punches are for the purpose of throwing out the ball as the dies part. The punches are set in holes in the respective dies, and are actuated by levers connected together at their upper ends by the rod 10. Screws regulate the point to which these punches may recede by the pressure of the lead. A cutter is made to cut off the lead at the proper time by means of a cam and lever, and, at the same time, a holding jaw comes up by a spring, or is pressed up by a lever and cam, so as to sustain the section of lead when cut off, and while being carried to the line of the die in the stock. For hollow or Minie balls the die is formed with a conical end to produce the cavity in the ball, and a fixed die is shaped to form the point of the ball with the delivery punch. To provide for groves around the ball, a divided face is made to the die r^2 r^3, and these pieces slide in grooves crosswise of the die *s'*, wedges projecting from the die r^1 or die-stock *c* being employed for opening and closing these face-pieces while the ball is formed, and delivering it by a reverse movement.

Claim.—First, the delivery punches 6 and 7, adjusted by means of the levers 8 and 9 and set-screws 11 and 12, in combination with the dies *r* and *s*, arranged substantially as set forth.

Second, in combination with the said dies *r* and *s* provided with the delivery punches, levers, and adjusting screws aforesaid, the holding jaw *q* and cutter *o*, arranged as and for the purposes set forth.

Third, the solid die *s'* and sliding face-pieces r^2 r^3, constructed and acting as and for the purposes specified.

Fourth, the cylinder *u* as constructed, having a partial revolving movement around the die *r*, in combination with the spiral spring *u'*, as set forth.

Fifth, the arrangement of the dies *s'* r' r^2 r^3 and wedge bars *t t*, acting in the manner and for the purposes set forth.

No. 34,845.—A. D. REEVES, of Portland, Maine.—*Improved Female Supporter.*—Patent dated April 1, 1862.—The claim and engraving explain the nature of this invention.

Claim.—The sack made in the shape and form and with the buckles and straps described.

No. 34,846.—C. ROBBINS and R. P. BURLINGAME, of Chicago, Ill.—*Improvement in Corn-Shellers.*—Patent dated April 1, 1862.—The endless belt revolves around two rollers firmly fixed in a frame, one of which is made adjustable, so that the belt can be tightened when desired. Plates of metal, provided with teeth, are placed on the belt. The under side of the yielding plates are also furnished with teeth, and, in connexion with the teeth on the belt, remove the corn from the ears which are supplied to it from a hopper.

Claim.—First, the use of the endless belt C, constructed and operating in the manner and for the purpose specified.

Second, the use of the yielding plates I I in combination with the endless belt, as and for the purpose specified.

No. 34,847.—SHERIDAN ROBERTS, of Cleveland, Ohio.—*Improvement in Barrel-making Machines.*—Patent dated April 1, 1862.—This invention does not admit of a brief description.

Claim.—First, the adjustable stock A, so arranged that the axis or pivot of said stock shall be in the rear of the knife and gauge, in combination with the screw R and nut S, so that, in adjusting the knife and gauge to the log, the knife-edge can be inclined and depressed at the same time as the knife sash *c* moves in a right line towards the log, in the manner specified.

Second, the gauge bar F, with its adjusting screws, sliding stock *c*, the adjustable yoke U, and screw R, in combination with the sash C, as set forth.

Third, the adjustable stock A, pivoted to the sliding sash C, in the rear of the knife D and gauge J, when operating conjointly in the manner and for the purpose specified.

Fourth, the curved knife D, knife gauge J, with its curved face and gauge guide N, in combination with the adjusting stock, as described.

Fifth, the arrangement of the sliding box *a*, levers *c' d'*, in combination with the springs *l m* and sleeve *j*, when arranged as and for the purpose specified.

No. 34,848.—DYER ROBINSON, of Reading Centre, N. Y.—*Improvement in Hay Rakes.*—Patent dated April 1, 1862.—The whole set of rake bars are pivoted on a bar connecting the two posts D on the axle of the machine. The rear ends of the rake bar are the largest, and thus keep the teeth down by their weight; when the teeth meet any obstruction, the bar readily rises. By means of a beam pressing on the front ends of the rake bars, and connected by a pulley and cord with a lever in reach of the driver's hand, the front ends of the rake bars can be depressed, which will raise the teeth of the rake from the ground.

Claim.—The arrangement of the lever M, pulley *d*, cord *g*, and bar I, with the rake bars G, posts D D, and thills C C, in the manner and for the purpose shown and described.

No. 34,849.—J. P. ROYCE, of Cuylerville, N. Y.—*Improvement in Harvesters.*—Patent dated April 1, 1862.—The side-draught frame consists of a metal plate, in form approximating a triangle, but with irregular sides, on and between the corners of which are cast journals and a journal box. On one of the journals is secured the internally toothed driving wheel of the harvester. On another is the intermediate track clearer. The third carries a friction wheel E bearing against the inner face of the driving wheel. On the fourth is arranged a lever standard perforated with a number of adjusting holes, and, curving over the driving wheel, sustains the driver's seat, which is so arranged with the draught frame and cutting apparatus, that the weight of the driver on the different parts of the seat may be employed for swinging the standard on its axis. A hinged brace or stay rod fits in and attaches loosely to the socket-bearing D′ by a pivot. The guard D^3 serves to lay the grain and prevent its twisting between the spokes of the wheel C. The various parts of the shoe or divider serve as a grain side runner, as a support for the finger beam and guide for the sickle, as standards to support the platform, and as a support to the grain side wheel.

Claim.—First, the side-draught frame A, provided with the journals *a b c d* and bearing box *e*, or their equivalents, constructed and applied substantially as and for the purposes set forth.

Second, the arrangement of the friction wheel *c* within the driving wheel and in the relation to the pinion *h*, substantially as and for the purpose set forth.

Third, the lever standard F, with driver's seat attached, connected to and arranged in line, or nearly so, with the cutting apparatus, and in rear of the draught frame, substantially as and for the purposes set forth.

Fourth, the arrangement of the hinged brace I, in connexion with the socket bearing D′, of the intermediate grain wheel C, substantially as and for the purposes described.

Fifth, the socket-bearing D′ and guard D^3, arranged in combination with the intermediate grain wheel C, substantially as and for the purpose set forth.

Sixth, the arrangement with the platform angular brace K and shoe or divider N of the angular hinged braces *v w*, substantially as and for the purposes described.

Seventh, the construction of the finger guards of U-form, and with pivot holes and tenons in combination with the mortised fingers, substantially as and for the purpose set forth.

Eighth, the shoe or divider, consisting of the parts N N' N^2 N^3 N^4 N^5 N^6, made in one piece, substantially as and for the purposes described.

Ninth, providing the shoe N with the perforations N^5, for the purpose of adjusting the hinged platform in the manner described.

Tenth, attaching the arms of the reel to the faces of a pulley and disk which revolve on a still shaft, in the manner and for the purpose described.

No. 34,850.—E. M. SCOTT, of Auburn, N. Y.—*Device for Cancelling Notes, Checks, &c.*—Patent dated April 1, 1862.—This machine consists of a firm upright plate of iron resting upon a foot, and to the upper part of the plate which bends over the centre of the support is attached a vertical tube, through which passes a rod having a cutter on its lower extremities, the rod being encircled by a spiral spring bearing against a shoulder on the rod and on the tube. The cutter is received by a bolster on a platform attached to the upright. A bracket on the upright contains a vertical tube provided with a rod and cutter, acting by means of a cam and geared crank. This cutter is designed to be used when many notes are to be cancelled together.

Claim.—A mechanism for cancelling notes, checks, and documents, constructed substantially as shown and described.

No. 34,851.—ROBERT SHEPARD, of Shaker Village, N. H.—*Improved Land-Leveller.*—Patent dated April 1, 1862.—The object of this machine is to level down ploughed ground, by scraping off the crowns of the furrows and depositing the excess in the depressions between them, by means of a series of ribs or flanges secured to the under side of a platform.

Claim.—A land-leveller, for agricultural purposes, composed of a platform and series of ribs, and operating in the manner and for the purpose set forth.

No. 34,852.—S. T. THOMAS, of Laconia, N. H.—*Improvement in Knitting Machines.*—Patent dated April 1, 1862.—The two arms of the rocker lever are nearly at right angles with each other, and upon the horizontal part is placed a weight held in such a position by a set screw as will cause the roller to exert the required tension upon the web, when the whole is in order to make perfect work. As the web becomes slack, the rocker bar is moved by the action of the weight, a tri-armed lever forming the communication between the movable rocker and those parts that serve to change the velocity of the feeding rollers that gripe and carry the web forward; the velocity being increased until the required tension is attained, after which it ceases to act until it is again required.

Claim.—The rocker bar, having an adjustable weight by means of which any required strain or tension may be applied to the web, in combination with the weighted tri-armed lever, or its equivalent, acting directly upon a friction cone driver, which turns the feeding rollers at the proper velocity, substantially in the manner described.

No. 34,853.—J. S. WHEAT, of Berkeley Springs, Va.—*Improved Apparatus for Tanning.*—Patent dated April 1, 1862.—The induction, exit, communicating and exhaust pipes being each provided with suitable cocks and branch pipes, are so arranged and combined with a series of air-tight tanning vats, that a current of tanning liquid can be forced through all or a portion of the vats impregnating and tanning the hides in the same. A series of valves loaded with adjustable weights, one on each of the tanning vats, are so arranged and combined with the above-mentioned pipes and their cocks, that, by shifting the weights on the valves and a corresponding opening and closing of the cocks, the current of the liquid passing through the several vats may be changed at pleasure, so as to enter the first and thence to the second and out at the third, or enter the second, thence to the third, and out at the first, &c., by which means the hides can be subjected to a weaker or stronger liquid as may be desired.

Claim.—First, the arrangement of the induction pipes E, exit pipes *a2 b2 c2*, communicating pipe F, and exhaust pipes *k l m*, with suitable branch pipes and cocks, as described, in combination with a series of vats A B C, constructed and operating substantially in the manner and for the purpose set forth.

Second, the arrangement of valves *g h i*, with adjustable weights *g′ h′ i′*, one on each vat, in combination with induction pipe E, exit pipes *a2 b2 c2*, communicating pipe F, and exhaust pipes *k l m*, and suitable branch pipes and cocks, all constructed, arranged, and operating as and for the purpose specified.

No. 34,854.—S. W. WOOD, of Cornwall, N. Y.—*Improvement in Breech-loading Firearms.*—Patent dated April 1, 1862.—The gate moves on a pivot on the breech-piece of the gun, and is countersunk in order that it may enclose the rear projecting end of the cartridge and barrel. The barrel projects into the rear end, and is bevelled in such a manner that the metallic cartridge can be removed by the fingers. The safety bolt is attached to the lock in such a manner that when the gate is closed, the bolt fits into a hole on its side, but when it is open, the bolt strikes against the side and prevents the hammer from being pressed down; another bolt is also attached to the hammer in such a manner as to project into the recess in the breech piece, when the hammer is at less than half cock, and so prevents the closing of the gate.

Claim.—Counter sinking the front face of the gate, so as to admit and enclose the rear projecting end of the barrel and cartridge, for the purpose specified.

Second, also the safety bolt A, arranged substantially as described, for the purpose of preventing the descent of the hammer while the gate is open; and in combination therewith the aperture *i*, or its equivalent, to allow the hammer to descend when the gate is entirely closed, substantially as specified.

Third, also the combined arrangement of the hammer and safety bolt, or bolts, in such a manner as to prevent the closing of the gate, as long as the hammer is less than at half cock.

Fourth, also a wedge M, for the purpose of starting the case of the exploded cartridge from the barrel or chamber, arranged substantially as described.

No. 34,855.—A. J. AMBLER, assignor to Himself, R. N. AMBLER, and WARRICK MARTIN, of Milwaukie, Wis.—*Improved Brake for Railroad Cars.*—Patent dated April 1, 1862.—This brake is designed to be operated by the movement of the cars, from the running gear thereof, and to be applied by a single person to all the cars of a train. The brakes of each car, being simultaneously applied with a uniform pressure, may be graduated as required, by means of tumbling rods placed longitudinally underneath each car just above the axles, and arranged with draw bars, so as to be rotated and lowered, and by means of gearing connected with a slide and belt shipper used in connexion with two cones, a belt and two cylinders; one cone and cylinder being placed on an axle of each car, and the other cone and cylinder on a lever connected to a chain attached to the brake bars.

Claim.—First, the tumbling rod V, in connexion with the belt shipper A′ and slide Z, for the purpose of operating the belt D′ on the cones P R, cylinder S, and cylinder or cone Q, all arranged substantially as and for the purpose set forth.

Second, the employment or use, in connexion with the belt D′, of the two cones P R—one, P, being placed loosely on the lever L, and the other, R, permanently attached to its axle C, for the purpose of actuating the lever L and operating upon the chain I′, as and for the purpose specified.

Third, the cylinder S placed loosely on its axle C, and the cylinder or cone Q placed

loosely on the lever L, when used in connexion with the cones P R, belt D′, and belt shipper A′, and all arranged as and for the purpose set forth.

Fourth, constructing the belt shipper A′ with slides *i i*, having rollers *k′ k′ n′ n′* attached and acted upon by the springs *d′ f′*, and arranged substantially as shown, for the purpose of loosening or relaxing the belt D′ on its return or inward movement on the cones P R, as set forth.

Fifth, the tumbling rod V, slide Z, provided with the double rack formed of the slot *s* and teeth *v*, and fitted on the double-grooved bars N N, as shown, in combination with the belt shipper A′, cones P R, cylinder S, cylinder or cone Q, and lever L, connected with the chain I′, by means of the pulleys *a a* and the chain I′, connected with the brake bars E E E′ E′, by means of the rods H H K, chain I, and pulleys J J, all arranged for joint operation, substantially as and for the purpose specified.

Sixth, suspending the tumbling rod V underneath the bed A of the car in adjustable bearings *i*, for the purpose of disengaging, when desired, the tumbling rod from the hand wheel *o*.

No. 34,856.—R. L. BATE, assignor to Himself and W. S. WILCOX, of Adrian, Michigan.—*Improvement in Air-heating Furnaces.*—Patent dated April 1, 1862.—This invention consists of two boxes, one over the other, with communicating flues, which encircle each. The cold air is made to pass between the fire boxes and also come in contact with all of the flues.

Claim.—The fire boxes E F, flues *b b c c*, cold air reservoir D, distributing pipes *a a*, radiating surface I, and pipes C, when combined, arranged, and operating in the manner substantially as described.

No. 34,857.—G. F. BLAKE, of Medford, Mass., assignor to Himself and PETER HUBBELL, of Charlestown, Mass.—*Improvement in Water Meters.*—Patent dated April 1, 1862.—The shaft of the registering mechanism works in a sleeve passing through the top of the valve chest; to the lower end of the shaft is attached a ratchet wheel which is operated by one of the slide valves; the plungers are made to reciprocate in opposite directions, the ports of one cylinder being controlled by the plunger of the opposite one; at each stroke of the plunger the ratchet wheel is rotated a distance equal to that between its teeth; the tappets project downwards from the ends of the valves, and pass through inclined slots projecting into the cylinders near their ends; the slide valves are operated by the striking of the piston against the tappets at the end of each stroke.

Claim.—First, operating the registering mechanism of a water meter by means of a ratchet wheel driven directly by the slide valve, substantially as described.

Second, the tappets *i j k l*, in combination with the slides J K, slots L, and plungers O O′, arranged and operating substantially in the manner set forth.

No. 34,858.—J. O. FARRELL, of Boston, Mass., assignor to Himself and WILLIAM VEAZEY, of Cambridgeport, Mass.—*Improvement in Wagon Springs.*—Patent dated April 1, 1862.—The front ends of the springs are attached firmly to a bar upon the forward axles, but the rear ends, by means of their jointed connexions, are allowed free play on the curved arms.

Claim.—The construction of side-spring wagons, with the rear ends of the springs D D jointed to curved arms F, which are also jointed to the hind axle, all as shown and described.

No. 34,859.—C. B. HOLDEN, assignor to Himself and S. H. BOWKER, of Worcester, Mass.—*Improvement in Breech-loading Fire-arms.*—Patent dated April 1, 1862.—The rear end of the barrel is closed by a pin larger than the barrel and pressing flat against it. This pin can be forced back by inserting the finger in a hole made near the end of the pin, and at the same time the hammer, which moves in a groove on the upper part of the open-sided cavity, can also be forced back and cocked. The pin when forced back allows the insertion of a metallic cartridge in the barrel of the gun. By means of a dog attached to the breech-pin, whose hook catches the flange of the cartridge, the discharged cartridge is removed when the breech of the arm is opened; when the breech is closed, a stop operated by the trigger-guard lever presses against its rear end and holds it firm. The trigger, when drawn back, presses against one arm of a bent lever, which causes the other arm of the lever to raise the sere F, which retains the hammer by the catch *h*. The breech-pin is made, when out of position, to slide over the stop F, thus disconnecting the trigger and preventing premature discharge. By means of a finger hole in the hammer, it can be let down slowly so as not to discharge the gun.

Claim.—First, the sliding breech-pin D and sliding hammer E, constructed and arranged in combination with each other, and applied to work either together or separately in an open-sided cavity *a a* in the frame A, substantially as specified.

Second, the stop F, applied and arranged in connexion with the trigger-guard lever and in combination with the sliding breech-pin D, substantially as and for the purpose specified.

Third, the trigger H applied in combination with the trigger-guard lever G and the stop F, substantially as and for the purpose set forth.

Fourth, the sere F′ and elbow lever I, applied in combination with each other and with the hammer and trigger, substantially as specified.

No. 34,860.—C. E. L. HOLMES, assignor to Himself and E. D. GRIGGS, of Waterbury, Conn.—*Improved Shade for Lamps.*—Patent dated April 1, 1862.—The claim and engraving explain the nature of this invention.

Claim.—A paper or cloth shade A, provided with a reflecting surface, produced by a lining *a*, of metallic foil or metal-covered paper or cloth, as and for the purpose specified.

No. 34,861.—R. KNOWLTON, assignor to Himself and JEREMIAH LAWS, jr., of Eureka, Ill.—*Improved Washing Machine.*—Patent dated April 1, 1862.—The cylinder is made with a corrugated surface, and is revolved first in one direction and then in the other, in this way communicating a rocking motion to the concave, which, in connexion with the rubbing of the cylinder, increases the cleansing effects of the machine.

Claim.—First, the combination of the cylinder B with the concave G, the latter being provided with rollers, when said concave is arranged with rockers *j*, as shown, to admit of the rocking or oscillating of the concave, under the action of cylinder B, as and for the purpose set forth.

Second, having the cylinders B, and the rollers *d e*, of the concave, covered respectively with zinc and copper, or other suitable metals, and arranged substantially as shown, to produce a galvanic action during the operation of the machine, for the purpose specified.

No. 34,862.—JOHN MORGAN, A. T. JAY, EDMUND EDWARDS, and JOSEPH TILSTON, of London, England.—*Improvement in Telegraphic Cables.*—Patent dated April 1, 1862.—The spiral coil of wire is surrounded by a covering of rope composed of vegetable fibre, metallic wires or ribbons, in such a manner that the stretch of the rope longitudinally is prevented by the resistance of the internal coiled wire to transverse strain, for the purpose of protecting from injury by such strain, the insulated conducting wire.

Claim.—The arrangement of a spiral coil of wire or metal ribbon A, with a covering of rope B, substantially as and for the purpose specified.

No. 34,863.—R. B. PERKINS, assignor to PARKER & PERKINS, of Meriden, Conn.—*Improvement in the Manufacture of Spoons.*—Patent dated April 1, 1862.—The end of the handle fits into the recess on the inside of the spoon, and is secured in that position by a rivet and by solder, in order that the handle may be more firmly fastened.

Claim.—Forming the recess in the bowl of the spoon for the reception of the handle by swaging the same by means of dies, as set forth.

No. 34,864.—JOHN PETRIE, jr., of Rochdale, England, assignor to JOHN COOKE, of Bradford, England.—*Improvement in Machines for Drying Wool, &c.*—Patent dated April 1, 1862.—A frame is constructed of any desired length, with its bottom and ends made of iron or wood, and having bars or supports arranged like the rafters of a double inclined roof, extending from a beam on the top of the frame to horizontal beams constituting the sides; on these bars, on each side, a long frame of wire gauze rests, hinged at its lower end at each horizontal side beam, so as to form a flap, on which the wool to be dried is placed. The box is provided at one end with a rotating fan which forces air into its interior. The box is traversed longitudinally by a series of steam pipes arranged underneath the flaps in such a manner that the air which is forced in by the fan, must come in contact with the heated pipes before it passes out through the gauze.

Claim.—The construction and arrangement of the case, air-chamber fan, and inclined perforated or woven wire flaps, to receive the wool to be dried, said flaps being so arranged as to expose the wool on an extended surface to the immediately surrounding air, to facilitate its placement, drying and removal, the whole being constructed, arranged, and combined in the manner and for the purpose set forth.

No. 34,865.—M. D. WHIPPLE, of Cambridge, Mass., assignor to the WHIPPLE FILE-MANUFACTURING COMPANY, of Ballardvale, Mass.—*Improvement in Machines for Cutting Files.*—Patent dated April 1, 1862.—Upon the main frame is secured a standard to which is pivoted an arm which carries a pulley furnished with a set of pins; another arm is pivoted to the arm K, whose inner end intercepts the path of the pins on the pulley, and to the outer end is secured a disk cutter; as the pulley revolves, the pins cause a rapid vibration of the cutter, which strikes on the edge of the file blank as it is fed along.

Claim.—As a new article of manufacture, a round or curved surface file, the teeth of which are cut in rows, winding spirally, substantially as specified.

No. 34,866.—M. D. WHIPPLE, of Cambridge, Mass., assignor to the WHIPPLE FILE-MANUFACTURING COMPANY, of Ballardvale, Mass.—*Improvement in Files.*—Patent dated April 1, 1862.—The claim and engraving explain the nature of this invention.

Claim.—The described machine for cutting the edges of file blanks, consisting essentially of the arm K, with its guide bar *r*, the vibrating arm *n*, with its cutter, the feed rolls G, and suitable gearing and mechanism for operating the parts, substantially in the manner specified.

No. 34,867.—A. B. COOLEY, of Philadelphia, Pa.—*Improved Floating Battery.*—Patent dated April 1, 1862.—The vessel is covered with a bomb-proof roof, having bomb-proof grating to allow ventilation, and enabling those inside to see where to direct the guns; the bars are designed to drop down to the bottom of the water; they are raised by a ratchet bar and wheel held by a pawl; on loosening the pawl the bars fall by their own weight.

Claim.—First, the vessel, with its central opening, in combination with the tube F, and anchoring bars K, for rendering the said tube stationary, while the vessel is revolved.

Second, the tube E, forming a part of the vessel, in combination with the tube F, and its flange *a*, the said flange resting on the pinions H, or their equivalents, of the tube E, as specified.

Third, the platform T, secured to the tube F, and arranged substantially as and for the purpose set forth.

No. 34,868.—G. L. BAILEY, of Portland, Maine.—*Improvement in Buckles.*—Patent dated April 8, 1862.—The long tongue passes through a hole on one end of the strap, the other end being attached to the opposite side of the bow. By reversing the position of the buckle, the two ends of the strap are drawn past each other, and the strap is tightened; the long tongue being secured by a loop or ring attached to the strap.

Claim.—The described buckle having one or more tongues rigidly fixed to or made a part of the bow of the same, when made and operating in the manner and for the purpose substantially as set forth.

Also, the use of the described buckle, in combination with the strap *o*, and the loop B, or its equivalent, substantially as and for the purpose set forth.

No. 34,869.—G. L. BAILEY, of Portland, Maine.—*Improved Ice Creeper.*—Patent dated April 8, 1862.—From that part of the creeper which rests on the heel, and on which are the spurs or projections, a plate of metal extends under the hollow and towards the ball of the foot. In the plate are openings through which pass a strap, by which the creeper is attached to the foot. This plate is also provided with shoulders which bear against the heel, and together with a spur on the inner side of the plate retain the creeper firmly on the boot or shoe.

Claim.—In a creeper the extended part containing the openings E E, in combination with he spur D, and shoulders I I, substantially as and for the purpose set forth and described.

No. 34,870.—TIMOTHY BAILEY, of Ballston Spa, N. Y.—*Improved Washing Machine.*—Patent dated April 8, 1862.—Swinging loosely on a rod extending from two uprights on each side of the box are pendants, to the lower extremities of which are attached beaters. At about the middle of each pendant is pivoted a horizontal bar, notched at its outer end. Behind the beaters is placed a shaft having upon it three cranks, which on rotating the shaft, are made to catch in the notches on the ends of the arms and draw them back. On further rotation of the shaft, the arms are released, and the beaters, owing to their weight, falling forward, strike against the clothes, and thus, in connexion with the suds contained in the box, effectually cleanse them. When the suds are removed, the beaters may be used for wringing the clothes.

Claim.—The combination of the self-locking and self-unlocking arms E and cranks G with the pendants C and beaters D, in the manner and for the purpose shown and described.

No. 34,871.—W. D. BARTLETT, of Amesbury, Mass.—*Improvement in Cooking Stoves.*—Patent dated April 8, 1862.—This invention consists in placing a fire pot within the oven and having the latter surrounded by flues communicating with the fire pot and smoke-pipe; the base on which the latter is fitted being provided with a check valve constructed of a perforated plate covered by a perforated slide, and all arranged so as to present to the oven a considerable radiating surface.

Claim.—First, the placing of the fire pot C, and flues F H, within the oven D, arranged relatively with each other, as shown, and with the flues E G I at the top, bottom, and back of the oven, substantially as and for the purpose set forth.

Second, the chamber J, communicating with the flue I and stove-pipe, when said chamber is provided with a partition *j*, and valve or door L, arranged as and for the purpose set forth.

No. 34,872.—IRA BISBEE, of East Phersalia, N. Y., and ARZA BISBEE, of Polk Township, Mo.—*Improvement in Hay Press.*—Patent dated April 8, 1862.—The middle lever of the three which are used, is provided at its centre with a pin which moves in a longitudinal slot in a bar between the transverse timbers of the press, and the two other levers are each connected by toggle joints, one to the follower and one to the stationary block on the transverse bar. By this arrangement a greater extent of movement is given the follower, and at the same time, the actuating lever being made a portion of the leverage system, the power of the press is increased.

Claim.—Operating the follower G of said apparatus by means of the system of three-jointed levers C D E, and a suitable actuating lever, when the said levers are made to act harmoniously with each other by means of the fulcrum pin *a*, which projects from the central lever D, into a guiding slot or groove in a portion of the frame of said apparatus, substantially as set forth.

No. 34,873.—J. BRAINERD and W. H. BURRIDGE, of Cleveland, Ohio.—*Improved Process of Extracting the Strength of Bark for Tanning and other purposes.*—Patent dated April 8, 1862.—The nature of this invention consists in extracting the tannin from bark or other similar substances by displacement, every portion of the bark being subjected to the action of heated water or heated spent tan liquor before said liquor becomes saturated with the dissolved tannin, thus insuring the complete extraction of the tannin from the bark, and also obtaining a completely saturated solution. The distinguishing feature of the apparatus for accomplishing this, is the means for the introduction of the bark at the bottom of an upright cylinder while the water enters at the top, thus displacing the bark, which is discharged at the top.

Claim.—Obtaining the extractive properties of bark by the process described.

No. 34,874.—J. N. BROWN, of New York, N. Y.—*Improvement in Boys' Sleds.*—Patent dated April 8, 1862.—This invention consists in the arrangement of a pivoted runner in front and midway between the ordinary runners of a boy's sled in combination with a foot lever or tiller and guiding cord, in such a manner that the said runner can be turned in either direction by the hands or feet, and the sled guided thereby.

Claim.—As a new article of manufacture, a boy's sled A, having a pivoted runner C in front, provided with a foot lever or tiller *d*, and guiding cord *s*, as and for the purposes shown and described.

No. 34,875.—ROBERT BRYSON, of Schenectady, N. Y.—*Improvement in Rakes for Harvesters.*—Patent dated April 8, 1862.—This invention consists in the combination of devices by which a rake is made to traverse the platform of a harvesting machine, and at the same time the teeth are swung up from and brought in contact with the platform alternately. The crank on the axle of the driving wheels by means of the connecting rod and vibrating lever, actuates the vertical rock shaft to which the rake head is attached, so that the rake head is caused to traverse the platform. To the rake head is attached a block provided with projections and recesses. The inclines upon the rear guard board, as the rake head traverses, press up one end of the weighted lever and free its hooked end from the recesses in the block, and thus allow the said block, when it comes in contact with the lever hooks, to be tilted to the extent of a quarter revolution, so as to turn the rake teeth alternately up and down.

Claim.—First, the combination of the vertical shaft E, angular guide bar I, rake head I, slotted arm F, connecting rod H, vibrating lever G, and crank B, in the manner and for the purpose described.

Second, the combination of the many-sided block K, rake head J, spring stop L, incline lugs N M', weighted lever hook M, and weighted tripping hook levers O O, the whole constructed, arranged, and operating in the manner described.

No. 34,876.—TISDALE CARPENTER, of Providence, R. I.—*Improved Method of Oiling Slides for Steam Engines.*—Patent dated April 8, 1862.—The object of this invention is to render self-lubricating the gibs and slides of steam engines or other machines having cross-heads or their equivalents working in straight guides, and allow the oil employed in such lubrication to be used over and over again, as long as may be desirable, instead of being thrown off from the slide and wasted. It consists in the combination of a hollow gib or shoe and oil reservoir at the bottom or at each or either end of the slide, the said gib or shoe being constructed with suitable openings for the reception of oil from the reservoir and for the delivery of said oil upon the surface of the slide.

Claim.—First, the combination of the oil reservoir at the bottom or either end of the slide and the hollow gib or shoe, substantially as and for the purpose specified.

Second, furnishing the oil reservoir with a cap piece or shield *d*, or its equivalent, formed to direct the oil to the induction opening *b b* of the hollow gib or shoe, substantially as specified.

No. 34,877.—TISDALE CARPENTER, of Providence, R. I.—*Improvement in Governor Connections for Steam Engines.*—Patent dated April 8, 1862.—This invention relates to the application of the governor to lengthen and shorten the arms of rocking levers by which the induction or cut-off valves are worked, and thereby cause the said levers to be capable of receiving from the cam or other device employed to impart motion to it from the main shaft of the engine, a motion which is variable, in such a manner as to enable the valve to be closed at an earlier or later period in the stroke of the piston of the engine as may be required to effect its proper regulation. It consists of a peculiar mode of effecting the connexion between the regulator and the stuffing pistons of the rocking levers, which provide for the lengthening and shortening of their arms, the object being to prevent any unsteadiness of the motion of the governor being produced in the shifting of the aforesaid portions of the lever.

Claim.—Combining the governor rod F, or its equivalent, with the toothed sector E, for operating the sliding rod or shifting portion D of the rocking lever of the valve gear by means of a pin I, attached to the said rod F, or equivalent, a slot or slots *c c*, in the sector and stationary grooves or guides *d d*, the whole applied and operating substantially as set forth.

No. 34,878.—TISDALE CARPENTER, of Providence, R. I.—*Improvement in Piston Packing.*—Patent dated April 8, 1862.—The ends of the expanding rings are bent into hooks which engage with hooks upon the packing ring. An adjusting screw is arranged radially to the centre of

the piston, one end passing into a tappet hole in the hub, the other resting against the packing. This screw serves the purpose of preventing the packing ring from turning and of centring the said ring to the piston head. The nut upon the screw serves to adjust the expansion of the packing ring, so that, by securing the nut towards the hub of the piston, it is made to press the spring against the lugs of the piston head, and the hooked ends of the said spring are caused to act upon the hooks of the packing ring so as to expand it.

Claim.—The arrangement and combination of the circular-expanding spring C, adjusting screw E, and nut *h*, applied in connexion with the packing ring and piston head, to operate substantially as and for the purposes specified.

No. 34,879.—W. H. CHAFFEE, of Flint, Mich.—*Improvement in Instruments for Measuring Distances.*—Patent dated April 8, 1862.—Upon a flat board fixed in a horizontal plane, and capable of adjustment to any position in this plane, is fixed a telescope fitted with cross wires, and near it is attached to the board by a pivot, another telescope, moving in the same horizontal plane with the first. The pivot is situated at the point formed by the intersection of the axes of the two telescopes, if prolonged beyond the eyeglasses. Attached at right angles to the movable telescope, and in the same horizontal plane, is a reflecting tube, and at the angle formed by the two is situated a mirror, whose surface is at an angle of 45° to the axes of the tubes. In order to calculate the distances of any object from the point of observation, the telescopes are adjusted until the object is equally visible through both, when an index upon the movable telescope indicates the distance of the object upon a scale constructed according to the mathematical rule which enables the length of the hypothenuse of a right angle triangle to be ascertained, when the length of the base and the angle formed with it by the hypothenuse are known.

Claim.—The combination of the two telescopes B C, the angular reflecting tube E, the index *c*, and the scale or scales *d e*, the whole combined to operate substantially as and for the purpose specified.

No. 34,880.—P. D. CUMMINGS, of Portland, Me.—*Kerosene Oil Burner.*—Patent dated April 8, 1862.—A sheath C is attached to the base of the burner, and in it a vertical rod attached to the burner cone plays up and down, a projection on the rod fitting in a vertical slot in the sheath. A portion of the sheath is cut away at its top, forming an inclined plane and shoulder, against which the projection on the rod bears when the cone is turned away from the burner. When it is desired to return the cone to place it over the burner, a slight motion is given to the lamp sufficient to cause the projection to travel up the inclined plane on the sheath, when the cone will be returned to its seat over the burner by its own gravity.

Claim.—First, so constructing a lamp for burning kerosene oil that its cone may be removed from over the top of the wick to a position at the side of the lamp, and thereafter be automatically returned to its position over the wick, substantially in the manner set forth.

Second, the sheath C, in combination with the rod *f*, substantially in the manner and for the purpose specified.

Third, removing the cone from its seat upon the lamp, first by a vertical movement and then by a lateral movement of the cone, for the purpose specified.

No. 34,881.—J. C. DAVIS, assignor to EDWARD HALL, of the county of Alameda, Cal.—*Improved Arastras.*—Patent dated April 8, 1862.—The circumferential band on the inside surface of the arastra is connected with the positive pole of the battery, and the metallic radial gutters are attached to the encircling wire connected to the negative pole. The arastras being filled with the pulverized ore, water, and mercury, the electric current is caused to pass through the mass, and thus facilitates the separation of the metals from their chemical combinations and furthers their amalgamation with the mercury.

Claim.—In the construction of arastras the combination of a circumferential metallic band *e* and metallic radial gutters G with wires D P and galvanic battery, as set forth.

No. 34,882.—SIMEON C. DAVIS, of Medina, N. Y.—*Improved Method of Grazing Sheep and other Animals.*—Patent dated April 8, 1862.—The claim and engraving explain the nature of this invention.

Claim.—The employment of movable racks or frames, provided with apertures or spaces in their sides, in such a manner as to allow the animals to reach without escaping through them, and thereby always to feed upon untrodden grass outside of the racks, substantially as and for the purposes specified.

No. 34,883.—W. H. DOANE, of Chicago, Ill.—*Improvement in Sawing Machines.*—Patent dated April 8, 1862.—The novelty of this invention consists in the combination of parts as designated in the claim, the object being to adapt an arrangement of feed rollers, patented to W. H. Doane and C. Mason July 27, 1858, to a reciprocating saw. The separate parts are disclaimed.

Claim.—The combination of the reciprocating saw R S, arm W, lever X, pawl Y, gearing Z A' B' J I, feed rollers F L, arms M N, spring P, and gearing G H H', all constructed, arranged, and operating in the manner and for the purposes shown and explained.

No. 34,884.—WILLIAM FULTON, of Elizabeth City, N. J.—*Improved Fastener for Lamp Chimneys.*—Patent dated April 8, 1862.—The object of this invention is to adapt a fastening which will hold the chimney or shade firmly to its place without breaking it by the pressure, and at the same time prevent the air from passing in under it, so as to cause the flame to smoke. This is effected by using an ordinary spiral or other spring. That portion of the spring bolt which presses against the chimney, instead of terminating in the ordinary way, is formed into two curved arms, one on either side of the bolt, extending partially or half way around the neck of the chimney, and having a downward pressure upon the flange of the chimney and a central pressure on the neck, thereby keeping it stationary.

Claim.—The curved clasp or arms C, as shown in Fig. 1 and Fig. 4, when attached to and formed of a bolt or pin, as shown at B, in Fig. 1 and Fig. 4, and made adjustable, in relation to the chimney, through the instrumentality of a spring, screw, or lever, substantially in the manner and for the purpose set forth.

No. 34,885.—K. H. ELLIOTT, of Eden, Vt.—*Improved Clothes-Wringing Machine.*—Patent dated April 8, 1862.—The loose collar to which the bearings of the upper pressure-roller is attached, plays up and down upon vertical screw rods. The semi-elliptical springs J, having one end attached to the bearing and the other end pressing against a thumb nut upon the extremity of the vertical rod, regulate the pressure of the upper roller, and by turning the nut, the tension of the spring can be increased or diminished, so as to adapt the pressure for clothes of different degrees of texture. The screws of the vertical rod pass through the nuts to which the bearings of the lower roller are attached. The journals of the upper roller rest in elliptical bearings, thus affording either end a certain degree of vertical play. The invention also consists in a means for attaching the machine to the sides of the tub. The pendants on the inside of the vessel have a swivel play, so that the securing cam can be brought firmly against the side of the tub, whatever may be the degree of curvature of its sides.

Claim.—First, the combination of the screw rods E E, springs J J, loose collars H' H', and nuts D D, arranged in relation with the bearings I a° of the roller shafts B B', to operate as and for the purpose set forth.

Second, the pendant fixed bars F, in combination with the swivel bars G, with cams H at their lower ends, the above bars being attached to the arms C C of the machine, and arranged substantially as and for the purpose specified.

No. 34,886.—R. W. GEORGE, of Richmond, Me.—*Improved Washing Machine.*—Patent dated April 8, 1862.—A rotary dasher, provided with an expanding or adjustable door, is arranged in such a manner that it will serve as a clamp to hold the portion of clothes previously cleansed within the dasher, while the uncleansed portion may project out therefrom and be subjected to a further rubbing and friction between the wheel and slatted apron or concave. In connexion with the above are cords attached to the concave of the machine to serve as a support for the clothes during the second or last operation to which they are subjected.

Claim.—First, the employment or use, in connexion with the dasher C, of a door E, so arranged as to serve as a clamp to secure the cleansed portion of the clothes in the dasher and admit of the uncleansed part to project therefrom, for the purpose of subjecting them to an additional rubbing operation, substantially as set forth.

Second, the peculiar construction of the reversible door E, as shown and described, to wit, having one side of convex form, corresponding to the curvature of the dasher, and the other side of flat form, and composed of two longitudinal parts F G, with a slide H between them for the purpose of expanding said parts, so that they may form a clamp, for the purpose set forth.

Third, the cords *l l* attached to the concave B, as shown, when used in connexion with the door E and dasher C, for the purpose specified.

No. 34,887.—FIRMAN GOODWIN, of Astoria, N. Y.—*Improvement in Fish Traps.*—Patent dated April 8, 1862.—The nature of this invention will be understood from the claim and engraving.

Claim.—The combination of vertically adjusted seines B, outer slatted anchor box A, inner adjustable slatted fish receptacle C, and taper decoy seines D D, substantially as and for the purpose set forth.

No. 34,888.—RICHARD HOSKIN, of Dutch Flat, Cal.—*Improvement in Hose Coupling.*—Patent dated April 8, 1862.—The ends of the hose to be coupled are stretched over a metallic thimble having enlargements formed at each end, upon which the hose is secured by a band or clasp, one end of which latter is provided with a forked head having a transverse slot, while the other end is formed into a loop, which is secured in the slot by means of a wedge.

Claim.—A hose coupling consisting of the metal band or clasp C, loop *c*, and key *d*, when arranged and operating in the manner described.

No. 34,889.—AUGUSTUS JENNY, of New York, N. Y.—*Improved Washing Machine.*—Patent dated April 8, 1862.—This invention consists in the arrangement of a rotary reciprocating

pounder to which the clothes are attached between two wash-boards, parallel to each other and hung on springs which fit in the grooves between a series of cleats on the sides of the tub, thus permitting the wash-boards to be adjusted at different distances from the pounder. One of the wash-boards is made in two parts, hinged together and connected by a cord passing through rollers on the sides of the box to the wash-board, so that the two parts can be brought together at their tops by pulling the cord. One end of the bent holder is pivoted to one side of the pounder; the other end is retained by a revolving catch to the opposite side, thus allowing the clothes to be readily removed. The pounder is hinged at about its centre, so that its lower end can be turned up and placed upon the hook or the bent arm of the crank, which arm may also be made to act as a wringer.

Claim.—First, the arrangement of the rotary reciprocating pounder G, in combination with the adjustable spring wash-boards D E, cleats *d d*, and line *f*, constructed and operating substantially in the manner and for the purpose shown and described.

Second, the holder H, in combination with the revolving catch *n*, spring *m*, and pounder G, substantially as specified.

Third, the arrangement of the arm or wringer *r*, in combination with the crank *g* and pounder G, as and for the purpose set forth.

No. 34,890.—HENRY KNIGHT, of Jersey City, N. J.—*Improvement in Moulds for Cement Pipes.*—Patent dated April 8, 1862.—The object of this invention is to produce a compression of the cement within the lower end of the vertical flask after it has been filled with cement, and thereby form a solid collar with a continuous right-angled socket within it. This is effected by means of the sliding collar and having a flange extending from the base plate. When the flask is first filled with cement, the sliding collar is dropped down from the base plate; but before the cement has set, it is forced up against the base plate, thus compressing the cement and forming a solid collar. The tubular portion of the detachable collar is inserted into the top of the tubular core. When thus adjusted it is revolved on the core and made to sweep off the surplus cement and smooth and finish the end of the cement pipe.

Claim.—First, the combination with a vertical flask of the lower sliding collar F and a central core, substantially as and for the purpose set forth.

Second, the combination of the tubular core, tubular detachable collar C, and a vertical flask, in the manner and for the purpose described.

No. 34,891.—WILLIAM LEVIN, of St. Louis, Mo.—*Improvement in Apparatus for Economising Fuel.*—Patent dated April 8, 1862.—This apparatus is composed of an air chamber formed like an inverted funnel and placed immediately under the fire chamber; it is provided with perforations in its sides for the admission of air. The lower part of the fuel basket projects down into the air chamber in such a manner as to admit the air to the bottom and sides of the fuel. Small holes in the sides of the fuel chamber serve to admit air directly over the fuel. Over the fire chamber is a flue having perforations at its lower part for the admission of air, so as to allow it to mingle with, and assist in the consumption of, the escaped gases.

Claim.—The peculiarly arranged combination of air chamber B, the fire chamber A, the flue C, the peculiar form of the grate or fuel basket *b b b*, when used in connexion with the holes *c c c c c c*, at *e* and at *g*, constructed in the exact manner described, and when arranged and operated in the peculiar manner and for the object specified.

No. 34,892.—M. K. LEWIS, of Iowa City, Iowa.—*Improvement in Carriage Brakes.*—Patent dated April 8, 1862.—The brake bar is connected to the pole by means of a rod and a lever in such a manner that when the team holds back the pole, the brakes are applied to the wheels, but are released when the team pulls forward. When the brakes are brought against the wheels they are caused to rotate by friction, and thus wind the chains which bring the brakes into close contact with the wheels. The brake is thus rendered self-acting, and the harder the pressure of the wheels the greater the power exerted by the chains to draw the brakes.

Claim.—Making the brake blocks which act on the carriage wheels to turn or rotate on the brake bar and wind chains which are fastened to the brake blocks and to some part of the carriage, so as to wind the chains around the hub of the brake block and draw the brake blocks against the wheels, as described.

Also, in combination with the above-claimed devices, connecting the breech bar to the pole, substantially as described, so as to operate or apply and release the brake by the team.

No. 34,893.—JOSIAH LONG, of Leavenworth, Ind.—*Improved Cutter Attachment to Ploughs.*—Patent dated April 8, 1862.—This invention consists of a curved cutter attached to the front part of the mould board, and attached at its extremity to the beam by a staple. A brace extends back from the cutter, and is attached to the upright shaft of the plough, so as to form a substantial support for the whole.

Claim.—The cutter, constructed as described, attached to the plough, as and for the purposes set forth.

No. 34,894.—J. D. LYNDE, of Philadelphia, Pa.—*Improved Bottle for Aerated Liquids.*—Patent dated April 8, 1862.—To a socket which is firmly attached by cement to the top of the bottle, is screwed the tube D, and between a shoulder on the socket and the lower portion is a disk provided with a perforation through which the hollow valve stem passes. This valve has upon it a recess, and at its bottom a projection which bears against the lower side of the disk so as to open the valve. The bottle is opened by pressing down the valve stem. The India-rubber spring which encircles it, retains it firmly against the lower face of the valve when the pressure is removed.

Claim.—The valve, as described, and its combination with the rubber spring L, the hollow valve stem H, the tube B, and the hollow mouth-piece A, constructed substantially as described and for the purposes set forth.

No. 34,895.—G. A. MEACHMAN, of New York, N. Y.—*Improvement in Button-Fasteners.*—Patent dated April 8, 1862.—This invention consists in attaching the flexible or cloth portion of the eye of the button to the rigid portion of the same by introducing a disk or circular plate within the cloth portion and the upper part previous to the bending of the edges of the latter, by which means the parts are securely united.

Claim.—The attachment of the flexible material D to the rigid portion of the eye by holding it compressed across the edge of a part M, or its equivalent, substantially in the manner set forth.

No. 34,896.—DAVID MAYDOLE, of Norwich, N. Y.—*Improvement in Skate-Fastening.*—Patent dated April 8, 1862.—The heel-strap or counter which extends up at the back of the skate, is firmly clamped between two plates, placed one over the other, and connected together by screws, the lower end of the counter being placed between the plates. Upon the upper part of the rear post of the runner, is cut a screw thread to receive a nut, and upon the same is also a plate having a projection on its under side, and a flanch around its edges, which serve as a protection to the lower part of the heel-strap, and as a socket to receive the heel of the boot or shoe.

Claim.—First, securing the heel-strap or counter K to the back part of the skate by means of the two plates H J, placed one over the other, and connected together by a screw or screws with the lower end of the strap or counter, placed between the plates, as set forth.

Second, the two plates H J, the former being provided with a flanch *f*, in combination with a screw *a*" on the upper part of the post B', and the nut I, placed on the screw and fitting in the hole *g* of plate J, all being arranged as shown, to admit of the heel-strap or counter being attached to the skate and the plates H J to the post B' thereof, as set forth.

No. 34,897.—G. A. MEACHAM, of New York, N. Y.—*Improvement in Buttons.*—Patent dated April 8, 1862.—This invention consists of a headed stud or fastening, so constructed as to be capable of being fixed to the garment independently of the button proper, and allow of the button being subsequently attached thereto, when used in combination with a solid-faced button-head, adapted to be so attached that the fastening may be firmly fixed to the garment, and the button loosely attached to and capable of turning thereon, and also allow of different buttons being attached to the same fastening if desired. The invention also consists in the employment of a movable key or locking piece within the button, in connexion with and so arranged relatively to an opening in the lock of the button, that the head of the stud or shank may be placed in the said opening after the stud has been fixed to the garment and be securely fastened therein, so that while the button is at liberty to rotate upon the stud, and to be locked to a limited extent thereon, it cannot be removed without unlocking or disengaging it.

Claim.—First, a stud or fastening D *d*, so constructed as to be capable of being securely attached to the garment independently of the button. and admit of the button being subsequently attached thereto, in combination with a button-head, and having a solid or continuous face, and adapted to be so attached in such manner that it may swivel around freely thereon, substantially as and for the purpose set forth.

Second, a button, having the key or locking piece C rotating or otherwise movable within it, and so arranged relatively to the opening M *m* in the back of the button and to the head *d* of the stud D that after the latter has been fixed to the garment the button may be securely fastened thereto, with liberty to move thereon, substantially as set forth.

No. 34,898.—DANIEL MERRILL, of Worcester, Mass.—*Improvement in Ventilators for Railroad Cars.*—Patent dated April 8, 1862.—Air is admitted into the air chamber by means of a long rectangular box on the top of the car. This box is provided with valves suspended by pivots in such a manner that one of them will open by the force of a current of air caused by the motion of the car, and the other will remain closed. The air passes through screens which free it from dust, and are so arranged that when the meshes become clogged the force of the air will cause the screen to vibrate and discharge the clogging material. The air passing into the air chamber is caused in warm weather, to pass over moistened cloths supplied with water, by which it is cooled, and in the winter is made to pass near a stove, so as to be heated. Afterwards it passes over a lower water vessel, by which it is freed from dust,

and then through flues into the air-distributer, extending the length of the car between the seats, and is discharged through a register in the top of the cars. In the winter season the flues are so closed by means of dampers that some of the air descends into the air passages in the floor of the car, so as to warm the feet of the passengers before it passes out. When too great a quantity of air enters the air-supply chamber, the weighted valves open and discharge the excess. The pure air entering the top of the car will force the impure air out through a register opening in the bottom of the car, whose motion creates a downward draught.

Claim.—First, the specified combination and arrangement of devices by which the car is supplied with currents of pure air, the same consisting of the tube or duct K provided with screens M M and valves L L′, as set forth, the induction pipe I, the air chamber D, furnished with dust separators and coolers, as described, the eduction flue I′ and the distribution pipe Q, having valves applied to it, as specified, the whole operating together substantially as set forth.

Second, the described and peculiar arrangement or application of the screens M M to the air-supply box K, whereby the same not only separate the cinders, &c., from the air, but are rendered self-cleaning, as set forth.

Third, the construction and arrangement of devices by which the supply of air to the air chamber D is regulated, the same consisting of the weighted valves *o*4 *o*4, and operating in the manner as set forth.

Fourth, the combination and arrangement of the two water boxes C E and disseminator F with the air-purifier and cooler, the whole being disposed within the air chamber D, and so as to operate as set forth.

Fifth, the described arrangement of the distribution chamber Q, provided with valves, as set forth, whereby the purified air is equally distributed throughout the car, the same being substantially as specified.

Sixth, the arrangement of the registers for the escape of foul air, viz: in the passage way between the seats, so that such air may pass through a pipe directly under the car into the atmosphere, or under the upper floor, and warm the same, prior to escaping out of the discharge passage, the same being substantially as set forth.

No. 34,899.—A. H. NEWTON, of Worcester, Mass.—*Improved Cruet or Decanter.*—Patent dated April 8, 1862.—This invention consists in forming the guide of the same material as the cruet, and having its inside hollowed out so as to receive the ball when the cruet is tilted. Openings made in the guide opposite the spouts allow free egress to the liquor contained in the cruet.

Claim.—As an improved article of manufacture, a cruet or other portable vessel for holding liquids, provided with a ball, valve, or stopper C, when said valve or stopper is used with a guard or guide B, which is formed of the same material as the cruet, and combined therewith in one piece, substantially as set forth.

No. 34,900.—ORRIN NEWTON, of Pittsburg, Pa.—*Improved Holder for Lamp Chimneys.*—Patent dated April 8, 1862.—The claim and engraving explain the nature of this invention.

Claim.—The use of a chimney-holder, consisting of a circular piece of metal or other suitable material, separate and detached from the burner frame, and surrounding the base of the chimney, and having projecting arms or handles, constructed and operating substantially as described, for the double purpose of holding the chimney in place in the burner frame, and removing it therefrom, without the necessity of handling the chimney in so doing.

No. 34,901.—R. B. NORMAN, of Sacramento, Cal.—*Improved Furnace for Roasting Ores.*—Patent dated April 8, 1862.—The transverse and longitudinal flues situated under the sole of the furnace conduct the products of combustion from the fire-box E to a flue at the rear part of the chamber, and from thence the flame passes to the top of the chamber and out through the opening communicating with the chimney. The ore spread upon the furnace is thus heated to such a degree as to volatilize all the sulphur contained in it, which is carried to the chimney, and may be collected in the chamber at the base of the chimney. The bridge-plate at the rear of the sole of the chamber, prevents the flame from impinging upon the ore, though it aids in heating it, and this, in connexion with the height of the chamber, prevents the combustion of only a small portion of the sulphur, insufficient to produce any injurious effects. When all the ore is desulphurized, it is readily oxidized and agglutinated by increasing the heat and admitting air.

Claim.—So constructing a desulphurizing furnace for roasting the ores of precious metals as that the heat shall be applied first beneath the sole of the furnace, and afterward on the surface of the ore, when the same is combined with a chamber, arranged in the base of the chimney, for the reception of such volatilized particles of ore, &c., as may be driven off by heat or carried over by the draught, substantially as described.

No. 34,902.—W. R. POMEROY, of Millersburg, Ohio.—*Improvement in Corn-Planters.*—Patent dated April 8, 1862.—This invention consists in an arrangement of devices for throwing the seed-dropping apparatus out of gear when it is desired to transport the machine to or from its work.

Claim.—The recess *g*, bar *f*, pivot *j*, and spring *k*, in combination with the wheel E and rebate C, when arranged and operating in the manner and for the purpose described.

No. 34,903.—PINCKNEY FROST, of Springfield, Vt.—*Improvement in Scythe Snaths.*—Patent dated April 8, 1862.—This invention consists in an arrangement of devices by which a scythe can be attached to a snath in such a manner as to render it capable of being adjusted in various positions to suit the operator, and as circumstances may require, such, for instance, as having its end secured more or less inward toward the outer end of the snath, and also more or less upward in a vertical direction, as well as having its edge throughout the entire length adjusted more or less upward, so that it will be more or less inclined in its transverse section.

Claim.—The arrangement of the slotted adjustable wedge G, screw D, and movable plate E, having perforations of the peculiar form shown, with the socket B, tange H, bolt F, and but A, as shown and described.

No. 34,904.—TIMOTHY RAYMOND, of Franklinville, N. Y.—*Improvement in Lamps.*—Patent dated April 8, 1862.—One side of the wick tube is movable, and its pressure upon the wick contained in the tube is regulated by the screw and spring, so as to regulate the flow of oil; a stationary wick is attached to the bottom of the tube, and is in contact with the other wick, so that, whether the latter be too short for the oil or not, the flow is not interrupted.

Claim.—The arrangement of the wick tube C, with the movable side *a*, spring *c*, and screw *d*, with the wicks E and F, connected and used as represented, whereby the wick E s regulated and supplied with oil, substantially as set forth.

No. 34,905.—CALEB SANBORN, of South Berwick, Maine.—*Improved Medicine for Croup.*—Patent dated April 8, 1862.—This medicine is composed of a tincture of the herbs Lobelia inflata and Scutellaria lateriflora, or blue scull-cap, to which is added a certain quantity of West India molasses.

Claim.—The compounding and mixing the forenamed ingredients in the manner and relative proportion as set forth.

No. 34,906.—J. M. SINGER, of New York, N. Y.—*Improvement in Sewing Machines.*—Patented in England, May 9, 1861.—Patent dated April 8, 1862.—The claim and engraving explain the nature of this invention.

Claim.—The combination of the feed bar of a sewing machine, with a cam for causing the feeding surface to reciprocate in one direction, and with inclined blocks that will cause it to reciprocate in a direction crosswise to the first, the combination being such that the feeding surface can be caused to move either longitudinally or transversely to the support of the material, according to the guide which is employed to regulate the direction of the feed, substantially as specified.

Also, the combination of the feed bar of a sewing machine with mechanism for raising it and lowering it—that is, constructed in parts, which are adjustable so as to vary the distance to which the feeding surface is protruded above the support of the work, substantially as specified.

Also, the combination of the same feed bar with mechanism for moving it either longitudinally or transversely to the support of the material, and also with adjustable mechanism for varying the protrusion of its feeding surface substantially as set forth.

No. 34,907.—J. S. SMITH, jr., of New York, N. Y.—*Improvement in Imitation Metal Embroidery.*—Patent dated April 8, 1862.—This invention consists in the use of twisted wires wound in a spiral form, and so collapsed as to bring the opposite sides in close proximity, whereby an elastic and flexible article is produced, which may be used for the manufacture of military shoulder straps, in imitation of the gold braid usually employed for this purpose.

Claim.—The imitation embroidery composed of the collapsed multispiral A B, constructed substantially as specified.

No. 34,908.—OLIVER SNOW, of West Meriden, Conn.—*Improved Spring for Lamp Chimneys.*—Patent dated April 8, 1862.—This invention consists in attaching to the upper part of a lamp top, a coiled wire spring which may be adapted to tops of different lengths, and which is placed entirely outside of the chimney, away from direct influence of the heat and out of the way of the feeding tube. The upper portion is bent in such a manner as to retain the edge of the chimney in position.

Claim.—The use of a coiled wire spring, in combination with the upper part of the lamp top, to secure the chimney in its place, when they are constructed, attached, and fitted to produce the effect, substantially as described.

No. 34,909.—G. L. SQUIER, of Buffalo, N. Y.—*Improvement in Harvester Rakes.*—Patent dated April 8, 1862.—The head of the rake is pivoted in the upright post, turning freely in the platform so as to form a swivel joint for the rake. The end of the rake is attached to the crank by means of the connecting rod in such a manner that on turning the crank half a revolution, the rake is drawn forward over the platform and retained in its place on completing the revolution of the crank, which in its descent causes the connecting rod to press against a bearing on the side of the platform so as to raise the rake above the same. When the rake has returned to its original place, the action of the spiral spring connecting the rake-

head to the post brings the rake down upon the platform. By means of the adjustable plate and pin, the stroke of the crank and the length of movement of the rake can be adjusted to suit grain of different lengths.

Claim.—First, the employment or use of the crank F, or its equivalent, connecting rod G, and bearing I, arranged substantially as shown, and used in connexion with the post or swivel head C, for operating the rake B, as set forth.

Second, the arrangement of the adjustable bearing I, of the connecting rod G, and the adjustable plate H, which connects the front end of the rod G with the rake-head *a*, in combination with the adjustable pin *f*, which connects the back or outer end of the connecting rod with the crank F, substantially as described, whereby the movement of the rake B may be modified or varied, as set forth.

No. 34,910.—HENRY STEINWAY, jr., of New York, N. Y.—*Improvement in Piano-forte Action.*—Patent dated April 8, 1862.—This invention consists in an arrangement of parts as stated in the claim, constituting a repeating device which is applied so as to be entirely independent of the jack, and by means of which arrangement the said device is designed to be more free and positive in its operation, while allowing the jack to operate with great freedom and certainty.

Claim.—First, the arrangement of the levers D E, post G, spring *h*, and screw *k*, relatively to the key, the jack, and the hammer, substantially as set forth.

Second, the arrangement of the regulating screw *m* and fixed rail *n*, in combination with each other, and the lever E, substantially as set forth.

No. 34,911.—J. L. SWAN, of Lowville, Vt.—*Improvement in Fire-arms.*—Patent dated April 8, 1862.—The nature of this invention consists in the combination of a barrel and movable breech with a socket on the stock adapted to contain the said breech and the rear part of the barrel. The loading is effected by disconnecting the barrel from the stock and introducing a loaded breech, which is fired by a piercing instrument entering a percussion cap situated in a conical hole at the rear end of the chamber, and communicating with the charge. The arrangement of breech and barrel facilitates their disconnection for transportation.

Claim.—The breech *h* and barrel *b*, fitted as specified, in combination with the socket *a*, receiving the parts, as set forth, when the explosion is effected by a piercing hammer 5 entering the detonating cap in the conical hole 6 of said breech *h*, substantially as set forth.

No. 34,912.—ALMON SWIFT, of Wolcott, Vt.—*Improvement in Corn Shellers.*—Patent dated April 8, 1862.—The cylinder G is placed just above the rasping cylinder, and is designed to receive the ears of corn before they pass on to the sheller. The ears, as they slip down the incline, fall into the flutes and are thus presented to the sheller parallel to its axis—the space between each flute not only acts as a stop for the next descending ear, but also tends to bring it into the proper position to fall into the next flute.

Claim.—The combination of the peculiarly constructed cylinder G, having not only a series of flutes *f f*, but a surface between each two of them, with the inclined receiver F, the rasping cylinder B, and its concave D, constructed and operating as and for the purpose specified.

No. 34,913.—GEORGE TEED, of New York, N. Y.—*Improvement in Banjos.*—Patent dated April 8, 1862.—This invention consists in the arrangement of a sound-board between the parchment head and the rim of the banjo. It also consists in a means of securing the parchment head and of tightening it. The metal ring fitting within the annular cavity is placed over the edge of the parchment and brought down firmly upon it by hooks passing through the annular ring and provided at their projecting extremities with screw nuts by which they can be made to tighten up the parchment.

Claim.—The sound-board C, interposed and forming a means of connexion between the parchment head B and the rim A, substantially as and for the purpose specified.

And also the ring D, having an annular cavity *a*, receiving within it the ring *b*, and hooks *c c*, and forming a means of connexion between the head B and sound-board C, substantially as described.

No. 34,914.—S. H. TIMMONS, of Memphis, Tenn.—*Improvement in Locomotive Lamps.*—Patent dated April 8, 1862.—This invention consists in a means of regulating the light of the head lanterns on locomotives, so as to diffuse or converge the rays as may be desired. This is effected by placing the lens as in sliding tubes on the front of the lantern which can be made to slide in and out by a connecting rod operated by the engineer. At the same time the position of the reflector can be altered and a still greater change produced in the light.

Claim.—Adjusting the distance between the lens *g*, and the reflector C, so as to converge or diffuse the light, as may be desired, by means of the rod *o*, or its equivalent, extending from the lamp to the caboose of the engine, within the immediate control of the engineer, substantially as described.

No. 34,915.—ELMER TOWNSEND, of Boston, Mass.—*Improvement in Sewing Machines.*—Patent dated April 8, 1862.—This machine is intended for leather or other heavy work, and the invention consists in so arranging the awl and needle as to puncture in opposite directions the material to be sewed, and also in feeding the material along by a lateral movement of the needle. The needle carrier is made to move vertically in the "postal carriage," which latter is provided with an upright standard extending up from the base plate, and has a reciprocating intermittent rectilinear motion given it by means of a cam and shaft. The "postal work supporter" consists of a support extending up from the main frame of the machine and provided with a suitable flat top surface, on which articles, such as harness braces, strong banding, &c., that cannot be conveniently sewn when placed on the ordinary plate of the sewing machine, are placed. The postal carriage and needle move in this postal support. The plate is used when the machine is adapted to ordinary kinds of flat work, and is supported at one end by the postal supporter, an opening being made for the reception of the head of the said supporter, in order that their faces may be in the same plane. The flat plate is extended to the main frame, and is then supported by a rebate.

Claim.—The combination of the postal carriage, and its operative mechanism, not only with an apparatus, substantially as described, for feeding and sewing an article to be sewed, but with a postal work supporter, arranged relatively to the main frame of the sewing machine, as represented.

Also, the combination and arrangement of a removable bearing plate N, with the postal work supporter B, and the postal carriage A, when applied to sewing mechanism of the kind, and to operate in manner substantially as described.

No. 34,916.—THOMAS WARKER, of New York, N. Y.—*Improvement in Apparatus for Aerating Liquids.*—Patent dated April 8, 1862.—The nature of this invention consists, first, in arranging two faucets, one to communicate with the gas space and the other with the water space of the receiver in such a manner that from one, pure gas and from the other, gaseous liquid can be drawn; also, in purifying the gas by compelling it to pass through the liquid contained in the receiver before it reaches the gas space. Second, in the arrangement of an upright tube, in combination with the collar forming the condenser between the generator and receiver, with the gas faucet in such a manner that said gas faucet and the liquid faucet can be made in one piece with the connecting collar. Third, in the arrangement and combination of a generator and receiver, which are connected by a collar containing a ball valve, upright pipe, safety valve, and two faucets.

Claim.—First, the arrangement of two faucets D E, one to communicate with the gas space and the other with the water space of the receiver B, as and for the purpose described.

Second, the arrangement of the vertical tube *c*, in combination with the connecting collar C and gas faucet D, substantially as and for the purpose set forth.

Third, the combination and arrangement of the generator A, receiver B, collar C, ball valve *a*, tube *c*, faucets D E, and safety valve F, all constructed and operating substantially in the manner and for the purpose shown and described.

No. 34,917.—LINN VAN ORDER, of Ithaca, N. Y.—*Improvement in Mica Lamp Chimneys.*—Patent dated April 8, 1862.—The claim and engraving explain the nature of this invention.

Claim.—So constructing the framework of the chimney as to enclose the edges of the mica on all sides, and making one end adjustable, so as to allow the ready and easy removal of the mica, for the purpose of cleaning the same, or renewing it when worn out, soiled, or otherwise injured.

No. 34,918.—A. B. TRAVIS, of Brandon, Mich.—*Improvement in Seed Drills and Cultivators.*—Patent dated April 8, 1862.—The nature of this invention consists in an arrangement of devices by which the teeth of a cultivator can readily be shifted laterally by the attendant, and also by which the depth of penetration of the teeth into the soil can be regulated.

Claim.—The frame F, having the standards *f* and teeth *g* attached, connected to the draught pole C by the universal hinge or joint *e*, resting on the adjustable bolster D, and operated through the medium of the rock shaft I, lever H, and slotted bar G, all arranged as and for the purpose set forth.

No. 34,919.—C. K. ALSOP, of Middletown, Conn., assignor to J. W. ALSOP, of New York, N. Y.—*Improvement in Percussion Cap Primer.*—Patent dated April 8, 1862.—Between the top and bottom plates of the primer is placed a disk which is provided with scallops in which the caps are placed, and underneath the disk is a spiral spring by which the disk is caused to rotate so as to force the caps successively into the extension as fast as they are forced out upon the nipple of the gun by the plunger. The annular partition in the extension forms a bearing for a spiral spring attached to the plunger, which causes it to return to its place after the cap has been forced out.

Claim.—In the construction of a portable hand primer, first, the extension F, in combination with a circular percussion cap primer and spring plunger, the whole constructed and operating substantially in the manner and for the purposes described.

Second, the tubular extension F, made with a right-angled discharge passage, and with an annular partition *i*, applied for the purpose and in the manner described, to a circular percussion cap primer.

Third, a circular percussion cap primer of the character described, so constructed that it holds a cap in suspension out of the circle of the top of the case A. and by the pressure of the thumb upon one of its parts forces the said cap vertically upon the nipple of a fire-arm, substantially as described.

No. 34,920.—D. B. CLEMENT, of Milton, Mass., assignor to C. B. BOYCE & Co., of Boston, Mass.—*Improved Clothes-Wringer.*—Patent dated April 8, 1862.—This invention consists in applying the power of a single spring to both ends of the roll through levers pivoted to the frame of the machine and connected at their outer ends by a spring. These levers are each provided with shoulders which bear upon the extremities of the axle of the upper roll and so apply the pressure. The object of the invention is to equalise the pressure at both ends of the roll, when one end is raised higher than the other, owing to the unequal thickness of articles passing between.

Claim.—Applying the power of a single spring H to both ends of the roll E, through the levers G, substantially as described.

No. 34,921.—E. E. CONRAD, assignor to HENRY COULTER, of Philadelphia, Pa.—*Improvement in Holders for Lamp Shades.*—Patent dated April 8, 1862.—The claim and engraving explain the nature of this invention.

Claim.—First, the clamps *a a a a* for the purpose of holding the shade as and for the purpose set forth and described.

Second, clamps *a a a a*, in combination with the double braces *b b b b*, and the wire rim C, in the manner and for the purpose specified.

No. 34,922.—CHARLES DRAEGER, assignor to himself and JOHN OTTO, of Indianapolis, Ind.—*Improvement in Repeating Fire-arms.*—Patent dated April 8, 1862.—The nature of this invention consists in the arrangement of a revolving magazine at the breech end of the barrel of a gun and the encasement of a helical spring within said magazine, which, when wound up, and all the cartridge chambers are supplied with powder and ball, the simple cocking of the hammer and pulling out the cartridge plunger causes the magazine to revolve and bring the chambers opposite the end of the barrel, so that the act of pushing the plunger forward sends the cartridge home to its proper place in the barrel for ignition, which is effected by the detonating needle moving longitudinally in the plunger and forced into the cartridge by the action of the hammer. The needle is thrown out of the cartridge by the action of a spiral spring attached to it.

Claim.—First, the arrangement of a cartridge magazine B, revolving on a longitudinal axis, as shown.

Second, a plunger *p* and needle *n*, constructed as set forth, and combined in their operation with a revolving magazine, as stated substantially; and

Third, the helical spring S, when used as shown, for the purpose of rotating the cartridge magazine B.

No. 34,923.—J. C. HOLSTON, of Derry, N. H., assignor to S. M. DAVIS, of Lawrence, Mass.—*Improvement in Coffee Roasters.*—Patent dated April 8, 1862.—The tube to which the cylinder is attached is made to rotate by means of the crank and turns freely in the tubular handle. The door of the roaster can be opened by the wire which catches upon a projection upon the handle when the door is closed, and thus keeps it shut.

Claim.—The combination of the hinged door B, the wire C passing through the hollow tube E, used to open and close the door B and the catch F, with a corn popper or coffee roaster, when constructed substantially as described and for the purposes set forth.

No. 34,924.—PHILANDER ROUSE, of Macedon, N. Y., assignor to Himself and W. S. HIGGINS, of North Bridgewater, Mass.—*Improved Topsail Rig.*—Patent dated April 8, 1862.—The object of this invention is to obtain the advantages of an auxiliary yard with the use of only one sail, so that when convenient said auxiliary yard can be lowered to the deck and the full sail set. The sail is provided at its middle with a band provided with lacings, by which the sail can be attached to the extra yard. The topsail yard can be lowered down to the extra yard so as to enable the upper half of the sail to be reefed. By means of an elevating screw the extra yard can be raised so as to take up any slack caused by the stretching of the sail.

Claim.—The third or intermediate yard, the lower yard, the topsail yard, and the single topsail, as arranged and applied together, substantially in manner and so as to operate as specified.

Also, the arrangement and combination of the elevating screw I, or its mechanical equivalent, with the mast or its cap, the three yards, and the auxiliary yard supporter or brace H, the whole being to operate substantially as specified.

No. 34,925.—H. B. THOMAS, assignor to J. W. ENGLISH, of Racine, Wis.—*Improvement in Dampers.*—Patent dated April 8, 1862.—This invention consists of a ring or annular plate fitted with a transverse spindle like a butterfly valve or ordinary damper, and having attached

to it on opposite sides, two disks of smaller diameter than its exterior, so arranged that when the ring is fitted to a smoke-pipe or other circular conductor, and the ring is brought to a position at right angles to the pipe or conductor in which an ordinary butterfly valve or damper is closed, there is a passage left round the valve between the ring and plates, so that while the draught or escape of heat is checked, the escape of smoke is not prevented and the heat is thrown equally against the circumference of the pipe.

Claim.—The valve composed of the ring and annular plate A and the two disks C C and spindle or journals *a a*, the whole arranged and applied in combination with each other, substantially as specified.

No. 34,926.—ROSEWELL THOMPSON, of Boston, Mass., assignor to Himself and J. C. WILDER, of Boston, Mass., and Z. W. HOLDEN, jr., of Bristol, Mass.—*Improvement in Sewing Machines.*—Patent dated April 8, 1862.—On the inner edge of the heel of the hook, and projecting a short distance above the flat face of the same, is a guard, the object of which is to prevent the thread from being oiled when passing the heel; the hook being driven by means of pins in the holes in its flat face. The removable bobbin case is placed in a round hole in the hook, and on its outer edge is a bevelled "start" which enters a slot in the face of the hook, so that the case is made to revolve with the hook, and at the same time the "start" operates as a cast-off for the thread, as the point of the hook enters the loop formed by the needle.

Claim.—First, the guard *k* upon the hook E, in combination with the driving pins *d*, substantially as described and for the objects specified.

Second, constructing the bobbin case *g* with a start *h* upon its outer end, substantially as described, for the purpose of confining said case so as to revolve with the hook, and also to act as a cast-off for the thread when the point of the hook has entered the loop formed by the needle.

No. 34,927.—J. W. WILCOX, of New York, N. Y., assignor to E. H. ENSIGN, of Orange, E. C. BRIDGEMAN, of Clinton, and T. C. FANNING, of Brooklyn, N. Y.—*Improvement in Envelopes.*—Patent dated April 8, 1862.—To the main flap of the envelope are attached two eyelets, through which passes a tape or string for the purpose of more readily securing the contents and prevent it from being surreptitiously opened without exposure when the envelope is sealed with wax. The envelope may be constructed in the ordinary thin form or in that of a rectangular box of any required thickness, and if the latter, providing it at its ends with small top flaps to be folded in over their contents before the main flap is closed.

Claim.—First, the combination of a tape or string with an envelope so attached as to allow of being slipped around to move the knot, as described, but not to admit of removal when tied, with the effect substantially as set forth.

Second, an envelope constructed in the box form, or with a rectangular transverse action, and strengthened by eyelets *e f*, or their equivalents, as described and shown.

Third, in envelopes of the box form, the use of the supplementary flaps *c d* at the ends, substantially as and for the purpose specified.

No. 34,928.—ISAAC WINSLOW, of Philadelphia, Pa., assignor to J. W. JONES, of Portland, Maine.—*Improved Indian Corn Preserved Green.*—Patent dated April 8, 1862.—The hermetically sealed cans which contain the corn are exposed to heat for a certain length of time, by which means the juices of the corn are coagulated and the tendency to putrefaction counteracted. The cans are then punctured, to allow of the escape of vapors, and immediately afterwards sealed up and again exposed to heat.

Claim.—The described new article of manufacture, namely, Indian corn, when preserved in the green state without drying the same, the kernels being removed from the cob, hermetically sealed and heated, substantially in the manner and for the purposes set forth.

No. 34,929.—SMITH GROOM, assignor to Himself, JACOB SHAVER, and LEWIS POTTER, of Troy, N. Y.—*Improvement in Stoves.*—Patent dated April 8, 1862.—The nature of this invention consists in the introduction into the fire chamber by means of annular rings provided with openings, of super-heated steam generated in the boiler, for the purpose of assisting in the combustion of the fuel.

Claim.—The combination of the annular steam chamber O, with the fire chamber B and the outside wall E, substantially as and for the purpose described and set forth.

Also, the combination of the annular chamber O and the annular steam pipe N with the boiler B by means of the pipes D C, substantially as and for the purpose described and set forth.

No. 34,930.—T. S. LAMBERT, of Peekskill, N. Y.—*Improvement in Cooking Stoves.*—Patent dated April 8, 1862.—This invention does not admit of a brief description; its nature will be understood from the claims.

Claim.—First, the application of one or more division plates, extending along the flue under the oven from one side of its bottom to its central diagonal line, in all these cases in which

the draught passes under the oven bottom at one side and leaves it from another at right angles to the former, substantially as set forth.

Second, the termination of the inner extremities of those division plates at the central diagonal line by parabolic curves, substantially as set forth.

Third, the continuation of those plates after they have curved, if they are continued along the flue under the oven till they reach the flue at the back of the oven, substantially as set forth.

Fourth, the attachment of division plates to the movable section of the bottom of the oven in such a manner that when the section is raised the division plates are removed and the flue easily cleaned, substantially as set forth.

Fifth, the construction of a flue across the entire back of the oven and leading to the pipe collar after the products of combustion have traversed four sides of the oven, substantially as set forth.

Sixth, the application of division plates in the back flues with graduated lengths to assist in equalizing the distances from different parts of the fire-box to the pipe-collar, in the direction of the draught, substantially as set forth.

Seventh, the application of the independent slides C C, or of one of them with its back holes twice as far apart as its front ones, so as to control the draught in the front and back part of the fire-box independently of each other or together, as may be desirable, substantially as set forth.

Eighth, the application of the division plate in the ash pit, for the purpose of supplying air to the back part of the fire-box, substantially as set forth.

Ninth, the application of a wide-margined grate rest, with perforations and a scolloped edge, or either of these devices in combination with a movable fire-plate at the side of the fire-box, substantially as set forth.

Tenth, the construction of the slide of the oven above the grate rest, substantially as set forth.

Eleventh, the construction of the damper rod with one or more joints, substantially as set forth.

Twelfth, the construction of holes in the margin of the sides and back of the bottom, in combination with the dampers leading into and out of the oven for the purpose of using the range as a heater when "jacketed," substantially as set forth.

Thirteenth, the combination of the slides or slide C or the division plate D with the perforated or scolloped grate rest, the partial and movable grate cover and the movable fire plate, substantially as set forth.

Fourteenth, the combination of the draught dampers or damper, the dampers over the oven, and the division down the flue at the side of the oven, under its bottom and up its back, substantially as set forth.

Fifteenth, the combination of the dampers leading into the ash pit or either of them, and those leading into and out of the oven with the holes in the sides of the margin of the bottom, substantially as set forth.

Sixteenth, the combination of each and all the three classes of improvements and particulars mentioned in the immediately previous three claims in one stove, substantially as set forth.

No. 34,931.—T. A. TUMMINS and A. F. W. EDWARDS, of Philadelphia, Pa.—*Improvement in Hammock Tents.*—Patent dated April 8, 1862.—The claim and engraving explain the nature of this invention.

Claim.—In combination with a circular tent having vertical walls, a series of hammocks E, arranged radially within the tent and connected to the pole of the same, the series of guy ropes G and standards D, when the latter, together with the canvas cover and aided by the guy ropes, serve to form the vertical wall, and when the several parts are connected together and arranged as and for purpose set forth.

No. 34,932.—C. W. WILLIAMS, of Boston, Mass.—*Improvement in Sewing Machines.*—Patent dated April 8, 1862.—The pressers are connected by their rods or shanks and suitable pivots to a lever D, hung by a joint or swivel-pin to the needle-operating lever at any given distance from the presser shanks. The mode of hanging the pressers is designed not only to insure an alternate action for each presser in harmony with each other and with the needle, but also to cause the pivot of either presser to become alternately the fulcrum for the rising presser, thus producing a continuous pressure by the pressers acting alternately.

Claim.—First, the combination of a feeding instrument, having a reciprocating movement in a horizontal plane only, with two independent pressers so arranged that one shall press the cloth so as to attach it to the feeding instrument, and the other shall hold the cloth upon the table, said pressers operating alternately, substantially in the manner described.

Second, connecting the two pressers with each other and with the needle arm by a lever or its equivalent, arranged and operating substantially as described.

No. 34,933.—WILLIAM ACKERMAN, of Flint, Mich.—*Improved Machine for Cutting Trees and Logs.*—Patent dated April 15, 1862.—This invention consists in the employment of a conical rotating cutting head formed of a number of tapering blades, and mounted upon the front end of a shaft which is journalled longitudinally in standards, at each end of a frame adapted to slide longitudinally in a main frame. Beneath this sliding frame is journalled transversely in the main frame a shaft carrying pinions which gear into racks attached to the sliding frame, and impart motion to the frame. A crown gear-wheel is also mounted upon a transverse shaft, and provided with bevel teeth which gear with longitudinal ribs upon the cutter shaft so as to impart rotation thereto. By this means a rotary and an advanced motion are simultaneously imparted to the cutter.

Claim.—The combination of the crank shaft H *h*, gear wheel I, sliding frame C *c* E F, ribbed shaft D, and rotary cutter G, constructed, arranged, and operating substantially as and for the purposes explained.

No. 34,934.—M. L. BAKER, of Mannsville, N. Y.—*Improvement in Machines for Gathering and Binding Grain.*—Patent dated April 15, 1862.—Between the upper parts of two uprights which are attached to the side pieces or handles of the machine, is journalled a bar or shaft B, through which pass a series of teeth *e*, which are slightly curved. These teeth are secured in a head to which are attached rods that extend downward and are attached to a treadle frame connected at its forward end to the front of the main frame. Attached to a cross-bar are two curved bars E extending upwards to serve as bearings for the cut grain while being bound. When a sufficient amount of cut grain is collected, the operator depresses the treadle, thereby elevating the fingers *e* and clamping the gavel between the fingers and the curved bars.

Claim.—The arrangement of the bar B and teeth *e* passing through said bar, with the head C, link *f*, treadle D, curved bars E, and frame A, as shown and described.

No. 34,935.—E. F. BASSETT, of Seymour, Conn.—*Improved Mattress.*—Patent dated April 15, 1862.—This invention consists in making the mattress endless, or in the form of a hollow cylinder, which, when in use, is pressed together and fastened so as to form a mattress of double thickness. When matted or crushed in one place, from use, the sides or ends of the mattress may be unfastened and a new surface presented by pressing the cylinder together at different points from the first.

Claim.—An endless mattress B, constructed substantially as shown and described.

No. 34,936.—WM. BOYNTON, jr., of Auburn, N. Y.—*Improvement in Churns.*—Patent dated April 15, 1862.—This invention consists in the employment of two dasher shafts provided each with slats placed sufficiently far apart to admit of the passage of cross-bars between them. Motion is imparted to the shafts by means of pinion wheels connected by a series of gearing with the crank shaft.

Claim.—The stationary shaft A, in combination with the double arms *a a*, the revolving shafts *k k*, and the cross-bars *h h h h*, operated as fully set forth and described.

No. 34,937.—J. R. BRADLEY, of Ironton, Ohio.—*Improvement in Converting Cast Iron into Wrought Iron and Steel.*—Patent dated April 15, 1862.—Green copperas, common salt, black oxide of manganese, litharge, yellow prussiate of potash, are added to the cast iron while in the boiling or puddling furnace, successively in the above order, and in certain proportions, when it is desired to produce malleable iron. For the production of steel the above substances are used, with the exception of copperas and litharge.

Claim.—The use of the several substances set forth in the foregoing specification substantially in the order, manner, and relative qualities set forth, for the purpose of more effectually and thoroughly converting cast iron into malleable iron or steel, as stated respectively.

No. 34,938.—J. W. BRIGGS, of Cleveland, Ohio.—*Improved Stitching Machine.*—Patent dated April 15, 1862.—This invention consists in the employment of an eye-pointed needle, which is forced through the material to be sewed by the action of the treadle strap and vibrating arm. A thread is passed through the eye of the needle, which is then forced through the article to be stitched. A common hand needle and thread is then passed by hand through each of the loops of the other thread on the back of the fabric, as they are successively formed by the action of the vibrating arm and feed motion of the machine.

Claim.—The combination of the eye-pointed needle A, the vibrating arm C, strap D, and treadle, with a feed mechanism, when the several parts are constructed and arranged as described, and for the purposes set forth.

No. 34,939.—EDWIN R. BROWN, of Chicago, Ill.—*Improved Ticket Recorder.*—Patent dated April 15, 1862.—The nature of this invention consists in a means of registering the number of tickets received in the machine, so as to prevent fraud in those receiving tickets, checks, &c. The machinery is enclosed in a box, from which projects the hand-lever and hopper for receiving the tickets. In order to admit tickets into the receiver, it is necessary to draw back the hand-lever, which by means of suitable gearing communicates to the drum which is geared with the index. The motion of the hand-lever causes the bell to sound.

Claim.—The combination of the hand-rod *a*, drum *g*, index *l*, bell *v*, and ticket receiver *c c* 2, or their equivalents, constructed, arranged, and operating substantially as and for the purposes set forth.

No. 34,940.—JOHN W. BROWN, of New York, N. Y.—*Improved Letter-Box.*—Patent dated April 15, 1862.—This invention relates to that class of letter-boxes which are attached to lamp-posts or other convenient fixtures in streets to receive letters. Above the opening in the receiving box is placed a cylinder provided with two openings, one communicating with the receiving box, the other for the insertion of letters. Outside of this cylinder is placed a movable semi-cylinder, which covers the opening, and inside the cylinder is another cylinder arranged so as to move in connexion with the exterior semi-cylinder. In the inner cylinder are two partitions, which form a central chamber, in which the letters are received when the semi-cylinder is turned so as to uncover the letter opening, but when the semi-cylinder is returned in its place, the mouth of the central chamber is brought over the opening in the receiving box, and the letter drops in it. The valve which is pivoted at one end to the chamber is so arranged that when the mouth of the chamber is uppermost it is parallel with one of the partitions, but when the mouth is down it has free play, and thus permits the diameter of the chamber to increase so as to prevent its choking by the crowding in of packages. The serrated edge prevents the withdrawal of letters or packages by means of a hook.

Claim.—First, the valve F, in combination with the chamber E, cylinder D B, and semi-cylinder C, the cylinder being provided with the openings *a b*, and all arranged for joint operation, as and for the purpose set forth.

Second, the toothed or serrated edge *s* of the opening *a* of cylinder B, when used in connexion with the semi-cylinder C and cylinder D, provided with the chamber E and valve F, for the purpose specified.

No. 34,941.—HIRAM BURK, of Mineral Point, Ohio.—*Improvement in Mining Drills.*—Patent dated April 15, 1862.—This device consists of a post or stand having near its upper end an opening through which the drill works. The drill is fitted in a rocking journal, which is provided with two bearing projections, a screw thread being cut on the inner surface of the journal which receives the screw on the shank of the drill. A cap or head piece is screwed upon the top of the post for the purpose of holding it in a vertical position, which is done by unscrewing it until it rises so that its top strikes against the top of the bank.

Claim.—First, the combination of post A, drill C, and its rocking and feeding journal D, substantially as set forth.

Second, the combination of the holding cap or head piece E, screw drill *c*, with its rocking and feeding journal D, with the post or stand A, said parts being arranged to operate in relation to each other as and for the purposes set forth.

No. 34,942.—WILLIAM B. BURNS, of East Saginaw, Mich.—*Improvement in Saw Mills.*—Patent dated April 15, 1862.—This invention consists in an improvement in that class of sawing machines which are provided with reciprocating saws, and are designed for sawing lumber direct from the rough log, so that two logs can be sawed simultaneously on each side of the saw gate, and also stuff of different thicknesses can be sawed from the same log by a plurality of saws. This is effected by having the saw gibs connected by two vertical rods, and making the saws adjustable on the gibs by having the upper end of each saw provided with a strap, which passes between the two plates of the gib, and is retained by a key, and by having the lower end of each saw hooked so as to catch into hook-formed plates permanently secured in the lower gib.

Claim.—The vertical rods G G and gibs or cross pieces H H′, connected and arranged as shown to form the saw gate or sash, in combination with the two carriages L L, and the adjustable gang saws I, placed at each side of the gate and fitted in the gib, as shown, for the purpose set forth.

No. 34,943.—CHARLES CHINNOCK, of Brooklyn, N. Y.—*Improvement in Beer Measures.*—Patent dated April 15, 1862.—This invention consists of a float, which is attached to an upright that moves through a slot in a bar extending across the top of the can. The float being too heavy to be raised by the foam, is lifted by the liquid as the latter flows into the can, and, by means of a scale on the upright, the quantity of liquid in the can is indicated.

Claim.—First, the use of a float, to separate the liquid from the foam, in combination with a beer measure, substantially as described.

Second, the application of an index to the float in the same combination by which the quantity of liquid in the can is accurately indicated and measured, independent of the froth.

No. 34,944.—WILLIAM A. CLARK, of Bethany, Conn.—*Improvement in Bullet Moulds.*—Patent dated April 15, 1862.—The cut-off is provided with two longitudinal slots, one of which plays under the head of the pivot screw, and the other under the end of a screw on the upper face of the mould, near the handles. A longitudinal movement is given to the cut-off by means of a lever having a projection which bears in a slot at the end of the cut-off.

Claim.—The mode of operating the cut-off of bullet moulds, made to slide longitudinally by a lever, substantially as and for the purposes set forth.

No. 34,945.—SAMUEL S. CROCKER, of Lawrence, Mass.—*Improvement in Machinery for Cleansing Paper Pulp.*—Patent dated April 15, 1862.—The larger receptacle consists of a cylindrical tub made concave at its bottom; at its lowest point is an opening provided with a valve, which communicates with another small receptacle provided with an aperture by which it may be filled with water, and also with an exit opening. The pulp, together with water, is admitted into the larger receptacle and the stirrer set in motion, by which means the mixture is made uniform, and at the same time the heavy particles caused to settle at the bottom, so that on opening the valve, they will fall into the lower receptacle, which being filled with water does not admit of any of the pulp. Light particles are drawn into the centre of the upper receptacle by the centrifugal motion communicated to the pulp, when they can easily be skimmed off.

Claim.—The combination of the large and small receptacles, arranged to operate together, substantially as and for the purpose specified.

No. 34,946.—JOHN DILLINGHAM, of Turner, Maine.—*Improvement in Wood-saw Frames.*—Patent dated April 15, 1862.—This invention consists in the combination of an auxiliary frame with sliding adjustable catches for the purpose of straining the saw. This is effected by compressing the two outer frame pieces, and slipping the dogs towards the centre of the cross-piece. The dogs take hold of the ratchet teeth on the under side of the cross-piece, and thus keep the saw strained.

Claim.—The combination and arrangement of the dogs or catches K L, with the double saw frame, when constructed and operated in the manner and for the purpose specified.

No. 34,947.—JOSEPH DITTO, of New York, N. Y.—*Improved Water-proof Coating for Cloth, Felt, &c.*—Patent dated April 15, 1862.—The nature of this invention is explained by the claim.

Claim.—Combining India-rubber and the residuary gum, separated from stearine, to form a water-proof coating, for the purposes described.

No. 34,948.—F. N. DUBOIS, of Chicago, Ill.—*Improved Machine for Amalgamating Gold.*—Patent dated April 15, 1862.—The gold is amalgamated in the cylinder by revolving it, which brings the particles of ore and mercury into close contact. In order to separate the mercury, the amalgam is conducted into the hopper and passes out through a conical feed valve into the sluice. A current of water is introduced on each side of the conical valve which washes out the amalgamated ore from the hopper. A rocking motion is given to the sluice, which latter is constructed of mercurialised copper and provided with low transverse partitions. The mercury settles at the bottom of the sluice and is retained by the partitions, the smaller particles adhering to the mercurialised bottom, while the gold is carried off by the current.

Claim.—First, the conical feed-valve C, with its attached water-pipe *l*, substantially as described and for the purpose set forth.

Second, the swinging vibratory sluice D, possessing the distinctive feature of its being swung upon the centre, from which the bottom of the sluice is struck, substantially as described and for the purpose set forth.

Third, the use of conical feed-valve C, and sluice D, in combination with the cylinder A, for the purpose of completing a new and useful process in amalgamating gold, substantially as described and set forth.

No. 34,949.—WILLIAM H. DUTTON, of Utica, N. Y.—*Improved Skate.*—Patent dated April 15, 1862.—This invention consists in so constructing the runner of the skate that it will form in its transverse section a section of a circle, and providing the said runner with longitudinal blades or projecting edges to catch into the ice and prevent lateral slipping. To the upper part of the rear end of the runner is hinged a plate, which during the forward motion of the skate is allowed to drag upon the ice, but acts as a pawl or hold-fast to prevent a backward movement of the skate.

Claim.—First, a skate provided with a runner A having its bottom or face of convex form, a transverse section of which is a section of a circle, and provided with longitudinal blades or edges *a* at a suitable distance apart, and extending its whole breadth or width, substantially as described.

Second, the pawl or hold-fast C, applied to the skate, substantially as shown and described, to operate as and for the purpose set forth.

No. 34,950.—CHARLES T. JAMES, of Providence, R. I.—*Improvement in Projectiles for Firing Hot Shot.*—Patent dated April 15, 1862.—This invention consists in making a case of a cylindrical form, suited to the bore of the cannon, with the forward end adapted to receive the shot after it has been heated, and provided with an expansible packing, which by the force of the explosion, will be expanded out and against the bore of the cannon and into the grooves thereof, if rifled, so as to stop windage and to give the required rotary motion to the shot when fired from a rifled cannon; the said case at the same time prevents the heat of the shot from firing the charge.

Claim.—The making of a case for firing hot shot, with an expansible packing ring, or the equivalent thereof, in combination with a cavity, or the equivalent thereof. at the forward end, so that it can be connected with a hot shot, substantially as and for the purpose specified.

No. 34,951.—ALBERT A. FREEMAN, of Philadelphia, Pa.—*Improvement in Portable Spool-holders.*—Patent dated April 15, 1862.—This invention consists of a spring supporter for a spool, which can be readily attached to the dress of the sewer, so that the end of the thread can always be within convenient reach. The supporter is formed of some elastic metal, and consists of a back-plate to which is soldered a plate spring, a thread-holding arm, and wire, which latter is coiled and then bent upward so as to produce a spring stem in front of the spring plate, whilst the other portion of the said wire is fixed to the rear side of the back-plate, and bent downward so as to form a spring pin, which catches in a hook on the lower end of the plate.

Claim.—A portable spool-holder, consisting of the attaching pin *f4*, the spring stem *f'*, the spring plate *d*, and arm *e*, the same being arranged and combined together substantially in the relation to each other described and set forth, for the purpose specified.

No. 34,952.—CARLOS FRENCH, of Seymour, Conn.—*Improvement in Car and Carriage Springs.*—Patent dated April 15, 1862.—This invention consists in making a spiral or volute spring from a corrugated steel plate, the corrugations running in the direction of the winding of the plate.

Claim.—A car or carriage spring wound into a spiral form, and having corrugations running in the direction of the spiral, said corrugations being formed in the plate in advance of the winding, by which means is produced a much lighter spring without detracting from its strength, substantially as described.

No. 34,953.—CONRAD FURST, DAVID BRADLEY, and JOHN LACY, of Chicago, Ill.—*Improvement in Horse Rakes.*—Patent dated April 15, 1862.—A socket is attached to the axle, in which moves a slide in which the rake head is placed. By means of this arrangement the rake can be used with wheels of any size, and also be raised at any desired distance from the ground.

Claim.—The slide and socket M and P, arranged in combination with the rake head and axle, in the manner and for the purpose specified.

No. 34,954.—CURTIS GOODWIN, of New Brunswick, N. J.—*Improved Cord-Winder.*—Patent dated April 15, 1862.—This invention consists of an upright stand or post, having a broad base, by which it may be attached to the counter, desk, or other stationary object About the middle of this post is a shoulder, and above this the post is formed into a pivot or gudgeon, upon which is placed a square thimble having an offset resting upon the shoulder When the device is used this square cap is inserted into the hole in the centre of the ball of cordage, which is then pressed firmly on the cap so as to keep the ball from slipping.

The device is designed to facilitate the unwinding of cord, for tying up packages or other purpose; for by simply pulling the end of the thread the ball rotates freely on the pivot and a sufficient quantity of twine is unwound.

Claim.—The post, with gudgeon and cap, made with a tapering square so as to adjust itself to a variety of sizes of balls or rolls of twine, rope, and cordage, substantially as set forth in the specification and drawings.

No. 34,955.—JOHN S. GAGE and P. D. BECKWITH, of Dowagiac, Mich.—*Improved Seeding Machine.*—Patent dated April 15, 1862.—This invention is designed as an improvement on the machine for which a patent was granted to John S. Gage, July 10, 1860; and it consists in a device for throwing the seed-dropping apparatus in or out of gear. The seed slides have a reciprocating motion communicated to them by means of a vibrating lever having attached to it near each extremity, rollers which bear against the cam surface of the outer driving wheel. Each end of this lever is connected by rods to the seed slides, which latter are thus caused to reciprocate as the machine moves along. A long curved lever is attached at one end to the main frame, the other end being provided with a latch, which fits in a slot in the upper corner of the hopper. This lever bears against the vibrating lever, and thus, when in place, keeps the seed-dropping apparatus in gear. The ends of the hub of each furrow wheel are fitted to work in an annular recess in the large end of the hub of the adjoining wheel, whereby any dirt which may be lifted by the wheels is prevented from falling on their bearings.

Claim.—First, the lever G, slotted plate O, fulcrum pin *a*, pin *n*, vibrating lever E, connecting rods *d d*, friction arms *b b*, friction rollers *c c*, with the cam surface J, and driving wheel B', when combined and arranged, to operate in the manner and for the purpose set forth.

Second, forming the ends of the hub *m* of each furrow wheel of unequal diameter, and having the small end of the hub of one wheel fitted to work within a recess in the large end of the hub of the adjoining wheel, in combination with the axle C, substantially as described for the purpose set forth.

No. 34,956.—ISAAC W. HARSHBARGER, of Brandonville, Va.—*Improvement in the Manufacture of Soap.*—Patent dated April 15, 1862.—The nature of this invention is explained by the claim.

Claim.—The employment or use of gum ammoniac and burnt copperas, when the same are mixed together with borax, spirits of hartshorn, sal soda, water, and ordinary hard or soft soap, substantially in the manner and for the purpose shown and described.

No. 34,957.—JOHN HAWORTH, of Manchester, England.—*Improvement in Street Railways.*—Patent dated April 15, 1862.—The main rails are flat and are flush with the surface of the street, and the wheels of the carriage are retained upon them by a guide-wheel attached to the carriage and running in a grooved central rail. This guide-wheel can be raised up from the guide-rail by means of a lever operated by the driver whenever it is desired to run the carriage off the railway.

Claim.—The employment, in combination with each other, of the flat-grooved central rail *c*, the adjustable guide-wheel C, running within said rail, and the flat rails *a a*, as shown and described.

No. 34,958.—JOHN HEATON, of Flushing, N. Y.—*Improvement in Raising or Lifting Weights.*—Patent dated April 15, 1862.—About the middle of the upright is pivoted a jointed lever, the joint connecting the two parts of which is formed by inserting a tenon on the inner part into a mortise on the outer part and connecting them by a pintle; the end of the tenon is bevelled from above, and sufficient space exists between this extremity and the back end of the mortise for the passage of the rope, which passes over a pulley on the top of the upright, and is attached to the upright. In order to operate this device, the rope is grasped by the operator with one hand while the lever is raised with the other. When the lever is raised the rope slips through the joint; but when it is brought down, owing to the lower end of the tenon being brought nearer the back end of the mortise, the rope is clamped, and a bight, equal to the distance the lever was raised, is taken up by the operator, thus raising the weight the corresponding distance.

Claim.—First, the lever A, formed of two parts, *a b*, connected by a joint B, arranged as shown, to admit of a rope E passing through it, and to clamp the rope as the lever descends, and to release the rope and slip over it as the lever is raised, for the purpose specified.

Second, the combination of the lever A, rope E, upright C, and base-plate D, all constructed and arranged for joint operation, as and for the purpose set forth.

No. 34,959.—DANIEL HEILIG, of Nebraska City, Nebraska Territory.—*Improved Mode of Cooking, Boiling, Evaporating, and Baking.*—Patent dated April 15, 1862.—Reference to the specifications and drawings will be necessary for an understanding of this invention.

Claim.—The combination, with a stove and furnace, constructed and operated as described, of the metal coils shown in Fig. 9, the concentric boilers, with their steam pipes, shown in Fig. 5, the water reservoir D, and the baker, as shown in Fig. 6, the whole being combined and operated together substantially as set forth.

No. 34,960.—ROBERT C. HELM, of New Brunswick, N. J.—*Improved Method of Producing Diagonal Cloth.*—Patent dated April 15, 1862.—The method of producing diagonal cloth, which constitutes this invention, consists in unwinding the cloth from one roller upon another placed obliquely to it. Only one corner of the cloth is attached to the drawing roller, and the delivery roller is then set at any desired angle, one bearing of said roller being swivelled, the other being set in a curved slot in order to allow for such arrangement. Consequently when the fabric is wound upon the roller, one edge is strained more than the other, and the threads are made to assume a diagonal direction. In order to vary the rapidity of the rotation of the drawing roller, as its diameter is increased by the cloth wound upon it, the strap which operates it is made to pass over two conical pulleys.

Claim.—The method described of preparing or producing what is known as diagonal cloth, or cloth in which the threads of the warp and weft are caused to occupy a position diagonal to each other, by the use of two rollers, one of which is placed obliquely to the other, or by the use of two parallel rollers, when the cloth passes from one to the other, in an oblique direction, substantially in the manner described.

No. 34,961.—SELAH HILER, of Harlem, N. Y.—*Improvement in the Manufacture of Gun Barrels.*—Patent dated April 15, 1862.—This invention consists of three features: First, casting the ingot or bar of cast steel from which the barrel is made around a central core, so as to form in the bar a longitudinal hole for the bore E; second, decarbonising the ingot in the usual manner until sufficient carbon is removed to allow it to be rolled; third, rolling the bar upon mandrels inserted in the bore and fixed so as to be held stationary and successively while the barrel is drawn off by the action of the rollers, decreasing the diameter as the barrel is extended and the size of the bore diminished by the rolling operations. It is claimed that by this process the texture of the iron is much consolidated and rendered fibrous and homogeneous.

Claim.—Manufacturing barrels for muskets, rifles, or other hand fire-arms, of iron or steel, by the combined operations, substantially as specified.

No. 34,962.—DANIEL HOLMES, of Chelsea, Mass.—*Improvement in Rolling or Frictionless Journals.*—Patent dated April 15, 1862.—The main axle bears upon the rollers B B', &c., which rotate between the axle and the bearing portion of the journal box. These bearing rollers are kept in place by the separate portion of the smaller rollers, while the enlarged head bears on one side against the flange D attached to the axle, and on the other against the end of the rollers B. By this means the several sets of rollers are kept in position without the use of grooves or guides.

Claim.—First, the enlarging of the ends of the rollers C C' C C', so that the velocity of their peripheries shall be just sufficient to secure a rolling motion on the inside of the flanges D D'.

Second, the combination of the flanges D' D, and the enlarged ends of the spool from rollers C C' C C', to secure rolling motion by means of which the principal rollers B B' B'', &c., are held in place, substantially as and for the purposes set forth.

No. 34,963.—W. H. HOTT, of Bethel, Conn.—*Improved Hat Felting and Sizing Machine.*—Patent dated April 15, 1862.—This invention consists in the employment of an adjustable endless apron, over a part of which is placed a feeding plate corrugated on its under surface, in connexion with a rotary pressing or rubbing cylinder. The cylinder is formed of a series of segment plates attached at one end by hinges to flanches, the journals of the shaft of which are fitted in the sides of the case. Each plate has a spiral spring bearing against its inner side for the purpose of keeping the plates pressed outward from the flanches. The hat body is subjected to the necessary friction and rubbing which is imparted to it intermittingly, there being a cessation of pressure from the time one plate leaves it until the adjoining one comes in contact with it. Underneath the apron is a board or chute inclining from the rear to the front of the case to conduct off the hat body when pressed.

Claim.—First, the adjustable endless apron B, and pressure or feeding plate K, with or without roller Q, in connexion with a rubbing cylinder or rotary rubber S, arranged for joint operation substantially as and for the purpose set forth.

Second, the peculiar construction of the rubbing cylinder or rotary rubber S as shown and described, to wit, having plates *k* of segment form hinged to flanches *m*, or their equivalents, on a rotary shaft, and acted upon by springs *s* in order to give the necessary pressure intermittingly to the hat body, as set forth.

Third, the combination of the inclined board or chute T, with the adjustable apron B, rubbing cylinder or rotary rubber S, and pressure or feeding plate K, as and for the purpose specified.

No. 34,964.—HENRY C. HUTCHINSON, of Cayuga, N. Y.—*Improvement in Lamps.*—Patent dated April 15, 1862.—Within or upon the central flue of the lamp is placed a perforated plate, which is designed to prevent a downward draught caused by raising or swinging the lamp.

Claim.—The device of a perforated guard or screen, to be placed upon or within the central flue of a kerosene lamp, by which the lamp is better enabled to hold the flame.

No. 34,965.—CHARLES T. JAMES, of Providence, R. I.—*Improvement in Projectiles.*—Patent dated April 15, 1862.—This invention consists of a device by which spherical shells can be fired from a rifled cannon and a rotary motion imparted to them. The sabot is surrounded with a packing which is expanded into the grooves of the gun by the force of the explosion, and is fitted with a concavity for receiving the shell and a hinged bale for securing the shell therein; this concavity communicates by suitable holes passing through it with the charge of powder in the gun, so that, when fired, the fuse of the shell shall be ignited at the same time that the packing is expanded.

Claim.—A case for firing spherical shells, which case is formed with a cavity in the forward end for receiving and holding the shell, and provided with expansible packing on its periphery, to be expanded by the force of the discharge in combination with a hole or holes or equivalent passage through from the cavity for the shell, to and through the rear end, all substantially as and for the purpose described.

No. 34,966.—A. S. JONES, of Joliet, Ill.—*Improved Millstone Pick.*—Patent dated April 15, 1862.—The object of this invention is to obtain a head which will admit of very thin cutters being securely fastened therein. The cutters are inserted between the spring and lips of the head, the projection on the cutters resting in the recesses in the head so as to prevent them from being forced backwards. The spring is then, by means of the screw and clamp, brought against the cutters so as to secure them firmly, while at the same time by its elasticity, the cutters are prevented from working loose under the continuous blows of the hammer.

Claim.—The head B, having recesses *b* in the upper or outer surfaces of its lips *a*, the spring E, strap C, provided with the screw D, or its equivalent, and the cutters F provided with the projections *h* at their inner ends, all being combined and arranged substantially as and for the purpose set forth.

No. 34,967.—GEORGE JONES, of Peekskill, N. Y.—*Improved Window Sash Adjuster.*—Patent dated April 15, 1862.—This invention consists in attaching to gauges fastened to the sides of the sash metallic springs, which bear against the rods and hold the sashes firmly at any desired elevation.

Claim.—The combined application of the curved metallic spring, rod, and gauge, constructed in grooves in the sides of the window sash, to the moving and adjusting of the sash within the frame, by means of which both the upper and lower sash may be moved up and down in the frame at pleasure.

No. 34,968.—C. L. KELLING, of Mechanicsburg, Pa.—*Improvement in Coffee Roasters.*—Patent dated April 15, 1862.—This invention consists in a means of attaching legs to a cylindrical coffee roaster by which it can be raised from the hearth of an open fireplace. These legs slide through hasps attached to the sides of the roaster, and are provided at their upper extremities with flattened hooks, which being turned under, project on the side so as to support it. The enlarged rim around the bottom of the roaster is for the purpose of raising it from direct contact with the top of a stove when placed thereon, the ventilating passages causing a current of air which prevents overheating and burning of the coffee.

Claim.—The sliding legs *s*, in combination with the hasps *s'*, projections *t' t2* and cylinder *a*, substantially in the manner and for the purpose specified.

Also, in combination with the cylinder or vessel *a*, and its bottom *p*, the enlarged rim *q*, having ventilating passages *r* therein, in the manner and for the purpose set forth.

No. 34,969.—SOLOMON KEPNER, of Pottstown, Pa.—*Improvement in Paddle Wheels.*—Patent dated April 15, 1862.—The main shaft has upon it a disk, and at a little distance therefrom, radial arms, which are connected to the disk by bars, between which the buckets are pivoted, the pivots being nearer the disk than the arms, so that the buckets fall by their own weight into a vertical position. Attached to the sides of the disk are the gravitating latches, arranged as shown in the engraving, so as to retain the buckets in a horizontal position during its downward movement, but falling down when the buckets commence to ascend, and allowing them to assume the position in which they pass through the water, with the least resistance. The segmental cams secured to the sides of the vessel keep the latches down on the buckets until they reach the end of their downward movement.

Claim.—The combination of the pivoted buckets G G', latches I I', cam J, and pins H K L M, arranged and operating in the manner and for the purposes set forth.

No. 34,970.—GEORGE F. KOLB, of Philadelphia, Pa.—*Improvement in Camera Obscuras.*—Patent dated April 15, 1862.—This invention consists in arranging in the upper part of a camera obscura, constructed with the eye tube opposite the lens, two reflectors, in such a manner that the objects reflected will appear to the observer right side uppermost.

Claim.—A box A of any suitable form with the lens tube B on one side and the eye tube K on the opposite side, in combination with the two reflectors G and F, arranged in respect to each other and to the eye and lens tube substantially as and for the purpose set forth.

No. 34,971.—THOMAS S. LAMBERT, of Peekskill, N. Y.—*Improved Military and Civic Bed Frame.*—Patent dated April 15, 1862.—This invention consists of a portable bed frame having an elastic bottom of variable width, and provided with hinged leg supports and head rests, so that it can be used as a litter or stretcher in the field, as a slide in an ambulance of any width, as a hospital bed frame, or as a single bed in domestic use. The bottom is so constructed as to allow access to any part of the person of the occupant, and to adapt itself to any position of his body.

Claim.—First, the combination of the elastic bands z with the non-elastic bands P, substantially as set forth.

Second, the application of the buckles S, in combination with the bands, for the purpose of regulating their position and condition, substantially as set forth.

Third, the construction and application of the cross pieces B C, and the plates to which they are attached, substantially as set forth.

Fourth, the mode of varying and fastening the head supports and legs in position, in combination with the frame, substantially as set forth.

No. 34,972.—GEO. G. LORDELL, of Wilmington, Del.—*Improvement in Cast Metal Car Wheels.*—Patent dated April 15, 1862.—The nature of this invention will be understood from the claim and engravings.

Claim.—First, securing the tire or rim B to the rim *c* of the wheel A by means of the bolts *g* passing through the rim *c* and the inner periphery of the tire or rim B, and having holes *j* made in the sides of the tire or rim B to turn the nuts *i*, as set forth.

Second, counterbalancing the wheel by pouring metal, lead, or other suitable metal into the chamber *e*, when said metal counterbalance is used or employed with the braces *f*, arranged as set forth.

Third, the combination of the hollow wheel A and the hollow tire B, when both are constructed, arranged, and secured together, as and for the purpose set forth.

No. 34,973.—A. J. LOCKEY, of Bradford, Wis.—*Improvement in Machines for Cutting the Bands of Grain Preparatory to Threshing.*—Patent dated April 15, 1862.—This invention consists in enclosing the shaft of the metallic cutting disk, which is intended to sever the

band of the sheaf before the grain passes to the threshing roller, within a tubular sleeve, for the purpose of preventing the straws from winding around the shaft.

Claim.—The circular metallic disk C, having its periphery cut in the form shown and described, when used in combination with the tubular sleeve or guard B, in the manner and for the purposes set forth and described.

No. 34,974.—ALEXANDER MCFARLANE, of South Genesee, Wis.—*Improved Device for Cutting Marshy Land.*—Patent dated April 15, 1862.—This device consists of a V-shaped frame, the side bars of which are connected at their front and rear ends by cross-bars. The ends of the side bars are provided with cylindrical tenons which fit into recesses at the ends of the cross-bars, and are secured by screws and nuts. Upon the outer sides of the side bars are secured in a vertical position the cutters C C. To the middle part of each of the side bars is attached a cross-bar which can be secured to the main central beam by a screw bolt and clip. These cross-bars can be raised and secured by a pin, when the side beams to which they are attached will be partially rotated and the cutters brought into an oblique position. The implement is used by first cutting the soil vertically in different directions at right angles with each other, and then passing it over the soil with the cutters adjusted to give the oblique cut.

Claim.—The oblique cutter bars *b b*, arranged substantially as shown, to admit of the adjusting of the cutters C in a vertical and in an oblique position, for the purpose set forth.

No. 34,975.—A. MCKISSICK, of Jordan, N. Y., and CHAS. M. FRENCH, of Weedsport, N. Y.—*Improved Machine for Renovating Feathers.*—Patent dated April 15, 1862.—Steam is admitted into the central steam tube from the steam eduction pipe, the valve on the central tube furthest from the entrance of the steam is closed, and thus the steam is caused to pass through the perforated distributing cylinders into the chamber containing the feathers. This chamber is then rotated, so that the feathers are subjected to the action of the steam and effectually cleansed. In order to dry the feathers the valves are opened, the close plug is removed from the end of the central tube, through which a current of steam is made to pass, heating and drying the feathers, and at the same time creating a draught outwards which removes all vapor from the vapor receiver. By means of the valves, in connexion with a plug of such a size as only partially closes the tube, the amount of steam passing through the tube can be regulated. The water of condensation is carried away by waste tubes extending down from the steam tube.

Claim.—First, the combination of the rotating feather receiver A, of polygonal or other form, in combination with the central steam tube B, tubular journals C C′, steam eduction tubes G, provided with the perforated distributing cylinders H and the valves E E′, arranged for joint operation, substantially as and for the purpose set forth.

Second, the tubular plug *g*, and close plug *h*, when used in connexion with the steam tube B, and with or without the valves E E′, for the purpose specified.

Third, the waste tubes F F, applied to the steam tube B, as shown, in relation with the feather receiver A, for the purpose set forth.

No. 34,976.—HENRY C. NICHOLSON, of Mount Washington, Ohio.—*Improved Cover for Fruit Jars.*—Patent dated April 15, 1862.—Around the neck of the jar is a groove bevelled upon its upper side; from the cover of the jar, at equidistant points, depend ears, which at the extremities on the under side, are provided with projections fitting in the groove. These ears are encircled by an adjustable broad ring, which when pushed down over the ears presses their projections against the chamfer of the groove, and thus draws the cover firmly down on the rubber gasket placed upon the rim of the jar.

Claim.—The arrangement of bevelled neck B *b*, cover C, ears D *d*, ring F, and a suitable gasket, the whole being combined and operating substantially as described.

No. 34,977.—WM. OSTRANDER, ISAAC D. REEDER, and JOSEPH CORDUAN, of Brooklyn, N. Y.—*Improvement in the Construction of Ordnance.*—Patent dated April 15, 1862.—The nature of this invention is explained by the claim, the object being to combine the greatest strength with the least amount of metal.

Claim.—Constructing a cannon by winding wire around a tube which has a breech piece inserted, and binding the whole together by casting metal upon it, in the manner and for the purposes substantially as set forth.

No. 34,978.—ROSWELL L. PEABODY, of New York, N. Y.—*Improvement in Watches.*—Patent dated April 15, 1862.—This invention consists, first, in the manner of imparting motion to the balance-wheel from the escapement, by which means a longer arc of vibration is given to the balance, and also an impulse in each direction. The lever arm is provided at its extremity with two prongs, which alternately strike against a pin projecting from the roller, so as to impart to it a return throw; at the same time a pin placed on the lever at an equal distance from the prongs, enters a notch made in the roller so as to give an impulse to the balance and cause it to complete its arc of vibration. The invention also consists in the manner of securing the hair-spring, by which all the vibration in that part of the spring

lying between the stud and the pin on the regulator, is prevented. The end of the spring passes through a cylindrical stud placed in a recess counter-sunk in the cock of the balance, and secured by another cock placed against the lower end in such a manner as to enable it to adapt itself to the position taken by the spring. The invention consists, further, in a construction of the shaft for the purpose of securing facility of repair and accuracy of adjustment, and in a method of setting the hands by which they can be set from the back, and the centre shaft is enabled to be made solid.

Claim.—The combination of the unlocking pin *s* with the prongs of the lever, and of the impulse pin *d* with the notches in the roller, in the manner and for the purposes substantially as set forth.

Also, the manner of securing the hair-spring to the regulator by means of the fixed and sliding pieces *m* and *n*, between which it may be firmly clamped, as set forth.

Also, the use or employment of the cylindrical and self-adjusting stud *k*, when said stud is secured upon the under side of the cock of the balance, in the manner substantially as set forth.

Also, constructing the staff by making it in two parts, upon one of which the roller, &c., is fitted, and upon the other the pins are turned, for the purposes and in the manner substantially as described.

Also, the supplementary shaft *s*, in combination with the gear of the centre shaft for setting the hands, as set forth.

No. 34,979.—CHRISTIAN PETERS, of Wadsworth, Ohio.—*Improvement in Shells for Ordnance.*—Patent dated April 15, 1862.—This projectile is made of iron cast in the form of a hollow sphere, from all parts of the surface of which are bored radial chambers, which are charged with powder and ball, and communicate with the interior of the shell. A hollow rubber ball which is compressed and inserted through the fuse hole into the interior of the shell, is filled with powder, and communicates by a fuse with the powder filling the space between it and the inside surface of the cavity. An ordinary time fuse is inserted into the shell, by which, at the proper time, the balls are discharged from the chambers, and the inner fuse ignited immediately after the shell is exploded. This shell being more dense than those of the usual construction, can be projected further, and at the same time is doubly destructive.

Claim.—The described construction of ordnance projectiles, the same being charged with leaden bullets, as specified, and provided with an interior magazine of powder, by which the projectile itself is instantly exploded after the discharge of the bullets, as set forth.

No. 34,980.—ABIEL PEVEY, of Lowell, Mass.—*Improvement in Casting Gas Retorts.*—Patent dated April 15, 1862.—The nature of this invention consists in constructing the flask with trunnions at or near its centre of weight, and mounting it upon stands fixed to a truck frame, in order that the flask may have a revolving motion, which will enable it to make a complete revolution on its trunnions, and at the same time have locomotion by means of the truck on which it is mounted, so that the entire work of making and drying the mould, setting the core, pouring and removing the casting, may be performed while the flask is so mounted.

Claim.—The flask constructed as described, when combined with the carriage or truck and its arm J and brace L, pins K and O, or their equivalents, in the manner described, for giving all the required movements and positions to the flask, with the greatest ease and precision, for the purposes fully set forth.

No. 34,981.—JAMES PLATT, of Utica, N. Y.—*Improvement in Rotary Engines.*—Patent dated April 15, 1862.—This invention relates to rotary engines in which the cylinder rotates about a stationary abutment head arranged within it, and it consists in an arrangement of induction and eduction pipes and passages to provide for the rotation of the engine in either direction.

The hollow stationary shaft which carries the stationary abutment head, contains three passages extending nearly its whole length, two of which are induction and eduction passages leading to passages in the abutment head which communicate with the steam way of the cylinder on opposite sides of the abutment. These eduction and induction passages have each attached to them one of two branches of the induction pipe, and one of two branches of the eduction pipe, the several branches being provided with separate cocks. By opening two of the cocks and closing the other two, the cylinder and shaft are caused to rotate in one direction, and on reversing the operation of the cocks, the cylinder and shaft will rotate in the opposite direction.

Claim.—The arrangement, in combination with the rotating cylinder, the stationary abutment head, and hollow stationary shaft E, of the two branched induction and eduction pipes Q *q q′* and R *r r′*, and cocks *q″ q′″* and *r″ r′″*, communicating with the separate passages *m m′*, of the hollow stationary shaft, all substantially as and for the purpose set forth.

No. 34,982.—J. L. RACE, of Port Washington, Pa.—*Improvement in Mode of Sustaining and Protecting Couplings of Shafting.*—Patent dated April 15, 1862.—This machine is designed to protect the knuckles of the jointed shafts which are used in many machines, so as to prevent them from catching in the clothes of attendants. The coupling is placed within an

inclined box, one end of which rests upon a slide at one end of the upright frame, the other upon a support at the other end of the frame at any desired height, by means of a pin passing through holes in the upright. The case can thus be adjusted to suit any degree of inclination of the shaft.

Claim.—The box B, fitted within the case A, and resting on the adjustable support *b* and slide *h*, all being combined and arranged substantially as and for the purpose set forth.

No. 34,983.—GEO. G. RAY, of Boston, Mass.—*Improvement in Penholders.*—Patent dated April 15, 1862.—Around the lower part of an unelastic penholder is placed a ferrule or tube of rubber, which forms an elastic rest for the fingers in using the pen.

To prevent the pen from coming in contact with the rubber, and owing to the chemical action induced by the ink adhering thereto, a metallic guard is inserted between the handle and the pen-supporter.

Claim.—The improved penholder as made with a metallic or non-elastic guard C, arranged between the handle A, and the elastic or rubber pen supporter B, the whole being constructed and applied together as and for the purpose set forth.

No. 34,984.—JOSEPH RIDGE, of Richmond, Ind.—*Improvement in Coal-Oil Lamps.*—Patent dated April 15, 1862.—This invention consists of a cylinder of mica, provided with a perforated metallic bottom to admit air, and with a metallic rim at top and bottom. To the top rim is secured a diaphragm constructed of any transparent substance or highly polished metal, and having in it a slot for the passage of the flame. A short chimney is secured to the upper metallic rim, and the whole device is fastened to the lamp, the wick tube passing through its centre.

Claim.—First, the mechanical device M, constructed substantially in the manner and for the purpose set forth.

Second, the diaphragm D, made and applied as described.

Third, the combination of the device M, diaphragm D, and short chimney C, constructed and arranged substantially in the manner shown in Fig. 1, and for the purpose described.

No. 34,985.—HENRY C. SERGEANT, of Cincinnati, Ohio.—*Improvement in Gas Regulators.*—Patent dated April 15, 1862.—This invention consists in the arrangement of a small screw, placed in one end of the key of the cock, so arranged that by turning it the opening in the key can be increased or diminished at pleasure, according to the amount of light required.

Claim.—The application of an adjustable screw, placed in one end of the key of a gas cock, so arranged as to control the amount of opening in the key, as specified.

No. 34,986.—WM. H. SEYMOUR and AARON PALMER, of Brockport, N. Y.—*Improvement in Automatic Rakes for Harvesters.*—Patent dated April 15, 1862.—This invention consists of a combination of devices by which a rake is made to traverse the platform in an arc of a circle, being thrown up from the platform and securely held when traversing in one direction, and brought down upon it firmly when traversing in another; a very slight impulse being sufficient to disengage the rake from either position. On the end of the vibrating arm, which is operated by means of gearing and a pitman, is placed a stationary cam over which a roller placed between two arms supporting the rake head, is made to traverse, that motion being facilitated by said roller having its bearing in two sleeves and supported upon the rods by spiral springs. By means of tripping levers, forming the extension of the rods, the yielding roller is thrown from its seat on the cam when the rake head has moved forward, and the rake falls by its own weight, and remains down until the grain is discharged, when the tripping lever causes the yielding roller to resume its seat and throws up the rake.

Claim.—First, the combination in an automatic rake, for a harvesting machine, of the following elements, viz: 1st, a post or standard capable of turning freely in its bearings; 2d, an arm secured rigidly to the post and capable of traversing only in a plane perpendicular to it; 3d, a stationary cam on said arm; 4th, a rake head capable of revolving freely around said arm in a plane perpendicular to it; 5th, a roller carried by the arm to which the rake head is attached and capable of yielding freely in its bearings to traverse over the stationary cam and hold the rake head in the proper position; 6th, a tripping lever upon the rod which carries the rake head; and, 7th, suitable stops or detents upon the front and rear of the platform, to raise and depress the rake at the proper moment, the whole operating substantially in the manner described.

Second, The combination of the stationary cam A, upon the end of the vibrating arm which carries the rake with the yielding roller *i*, upon the rake rod when operating substantially in the manner described, for the purpose of holding a rake head up during its forward movement, and of pressing it down firmly upon the grain when raking off.

Third, the combination of the stationary cam A, the yielding roller *i*, and the tripping lever I, substantially in the manner and for the purpose specified.

Fourth, the combination of the yielding roller *i*, with the rake rods I, as described, for the purpose set forth.

No. 34,987.—CHRISTIAN SHARPS, of Philadelphia, Pa.—*Improvement in Metallic Cartridges.*—Patent dated April 15, 1862.—This invention relates to an improvement in the metallic cartridge used in the French fire-arms known as "Lefaucheux's" revolver, which has a pin or rod at the rear of the case, and in the interior a wad, in which is imbedded a cap to be exploded by the rod when the latter is struck by the hammer; and it consists in making the base of the casing so much stronger than other parts of the same that it will resist the shock to which it is subjected, and will retain its form after the discharge of the cartridge, the base being of sufficient thickness to allow for the formation therein of a hole for the reception of the detonating material, and the rod for exploding the same.

Claim.—The metallic cartridge case composed of the hollow cylinder A, with a base *a*, of such a strength as to effectually resist the shock to which it is subjected, and of such a thickness that an orifice may be formed in the solid metal of the base for the reception of the detonating compound, and a rod or wire for exploding the same, as set forth, for the purpose specified.

No. 34,988.—JOHN C. SMITH, of Troy, N. Y.—*Improvement in Sewing Machines.*—Patent dated April 15, 1862.—The object of this invention is to effect the feeding of the cloth by means of the thread, simultaneously with the tightening and completion of the stitch, without the use of moving feeding plates pressing or gripping on the upper or lower surface of the cloth fed. Attached to one side of the cross-head, which has a horizontal reciprocating motion communicated to it, by means of a rod attached to the driving wheel of the machine, are the fingers, which take the loop on the needle thread formed after the down stroke of the needle, deliver the thread to the toe of the stationary spool case, and at the same time open and enable the thread to slip between the toe and the stirrup, through which the toe passes; this motion secures the passage of the thread around the spool box, and enables it to complete the stitch in connexion with the under thread. Simultaneously with this, a cam attached to the cross-head strikes against the arm *p* and through arm T, and gives to the feed bar a reciprocating movement transverse to the movement of the cross-head. This feed bar slides under the slotted sewing plate, and is provided with a slot through which the needle thread passes, and thus its reciprocating movement, at the same time that the stitch is tightened, gives the desired feed movement to the cloth.

Claim.—The fingers R, stirrup *v*, spool box B′, and spool W, in combination with feed bar S, arms T U *p*, cam *r* on cross-head Q, needle *f*, and sewing plate C′, arranged in the manner and operating for the purposes fully described and shown.

No. 34,989.—JOHN E. SMITH, of New York, N. Y.—*Improvement in Electro-Magnetic Telegraph.*—Patent dated April 15, 1862.—The armature of the sounder magnet is attached to one end of a lever balanced by means of a centre shaft and bearing screws, between two upright standards; to the other end of the lever is attached the armature of the second magnet. This magnet is connected with a branch of the local circuit, in such a manner that when the armature of the relay magnet recoils, it comes in contact with a screw head, so as to cause a completion of the circuit, thereby operating the magnet, and causing its armature to be attracted. By this arrangement the lever is caused to strike alternately upon the sounding screws as the circuit is opened and closed. The spring, which is usually made to act in opposition to the sounding magnet, is dispensed with, and a great saving of battery power is thus effected.

Claim.—The employment, in combination with the lever C, of the sounder or register of a second electro-magnet F F, which is brought into action by the recoil of the armature of the relay magnet, substantially as and for the purpose specified.

No. 34,990.—JAMES SPEAR, of Philadelphia, Pa.—*Improvement in Cooking Stoves and Ranges.*—Patent dated April 15, 1862.—This invention consists in placing under the hearth of an ordinary cooking stove a removable box, over which is placed a frame provided with an ash sieve, and having a longitudinal vibratory motion.

Claim.—The combination of the ash sieve A, drawer B, box C, with the removable frame D, when applied to the hearth of a stove, and constructed to operate substantially as described.

No. 34,991.—C. D. STEVENS, of Mendota, Ill.—*Improvement in Apparatus for Evaporating Saccharine Juices.*—Patent dated April 15, 1862.—This invention consists in placing the boiling and evaporating pans over and in a higher plane than the steam-boiler from which steam is conducted under the pans, so that the water of condensation may be returned to the boiler.

Claim.—The arrangement and construction of the boiling and evaporating pans in relation to each other and to the steam boiler C, substantially in the manner described.

No. 34,992.—J. W. SYKES, of Chicago, Ill.—*Improvement in Floating Grain Elevators and Dryers.*—Patent dated April 15, 1862.—The nature of this invention is explained by the claim.

Claim.—Combining with an elevating apparatus arranged upon a scow or other floating

vessel, an interposed drying apparatus (Wheeler's patent of October 23, 1860, or any other,) the whole forming a floating grain dryer and elevator capable of transferring grain from one vessel to another, or from a vessel to a storehouse, or *vice versa*, and of drying the grain while in the process of being transferred; and the whole apparatus capable of being easily floated from one locality to another as may be required, for the purpose of elevating and drying the grain.

No. 34,993.—A. C. TWINING, of New Haven, Conn.—*Improvement in Apparatus for Making Ice.*—Patent dated April 15, 1862.—Within a cylinder, which is filled with a solution capable of being cooled down to a low degree of temperature without freezing, is placed a series of pipes opening at the top and bottom into tight compartments, which are connected with two pumps, one acting as an evaporator, the other to remove the unevaporated liquid. Into the upper compartment is introduced, by means of a pipe, a volatile liquid capable of producing, when evaporated, a low degree of cold air, which flows through the pipes and thus cools the solution in the exterior vessel. This cooled solution is made to circulate through a large vat, in which are placed vessels containing the liquid to be frozen. The vat is divided transversely by partitions, which are high and low alternately, in order to produce a circuit around the vessels, and the pipes which conduct and remove the freezing liquid, communicate with the vats by branch pipes placed at intervals along its sides, and provided with cocks. By this arrangement the place of entrance of the freezing liquid can be shifted to different parts of the vat, so that all the vessels of liquid therein shall be subjected in turn to the freezing liquid when at its lowest temperature.

Claim.—First, the combination of the following four things, or any combination substantially the same, viz: the cooling vessels B B *t t* F F; the exterior liquid in A A A, cooled by contact with the preceding, as above; the pump C, or other equivalent means, by which the said liquid leaves A A A and returns; also, a containing vessel or vessels in which or upon whose contents said liquid is to perform its congealing or refrigerating work.

Second, the employment in combination of a freezing liquid shifted progressively by means of a hose or by pipes, valves, or cocks, substantially as described, from one part to another of a trough or vat with freezing vessels contained therein, so as to create substantially what is denominated the progressive circuit of cold currents; also, the vat, with its troughs, pipes, valves, and cocks, such as may be necessary, or any combination or construction substantially the same for effecting that circuit.

Third, the following four parts, in combination, for a generator B B *t t* F F of cold, viz: the opening or pipe S for introducing the liquid or solution, from which vapor or gas is to expand and produce the cold; the pipes, or narrow compartments *t t t*, down which the above is to flow by gravity in thin sheets of liquid; the lower compartment F F opening into the pump D, for removing residuum, and the exterior liquid in A A A cooled and made to circulate, all substantially as described.

No. 34,994.—ALLEN WALTON, of Philadelphia, Pa.—*Improvement in Apparatus for Mixing Gases.*—Patent dated April 15, 1862.—This invention is designed as an improvement upon a meter for which a patent was granted to James Cutchett, in England, on July 12, 1862, in which a definite quantity of air is mixed with a definite quantity of gas, and consists in combining with the meter a chamber, into which both air and gas are admitted and intimately mixed prior to being discharged into the distributing pipes, by which thorough and complete admixture of air with the gas, the flame is rendered unvarying and of uniform brilliancy.

Claim.—Combining a chamber, or reservoir A, with Cutchett's patent gas meter, the said chamber being so situated that both the air and gas must pass into and be mixed intimately together in the said chamber prior to escaping to the distributing pipes.

No. 34,995.—W. A. WOOD, of Hoosick Falls, N. Y.—*Improvement in Harvesters.*—Patent dated April 15, 1862.—On the stubble side of the shoe is a recess, into which is fitted the end of the extension bar, the finger bar being placed over the same. A screw provided with a washer and nut, passes through the shoe and finger bar and secures them firmly together. The main axle passes through the sleeve of the tongue plate, and the seat is fixed to the sockets.

Claim.—Uniting the extension bar to the shoe by means of a socket and pin, so as to underlie the finger bar, that is also united to said shoe, substantially as described.

Also, the tongue plate T, provided with a sleeve *k* and sockets *l l*, or seat supports, cast in one piece, as described and represented, and for the purpose stated.

No. 34,996.—R. V. DE GUINON, of Hudson, N. Y., and G. W. BARCLAY, of Brooklyn, N. Y., assignors to J. A. NEWBOULD, of New York, N. Y.—*Improvement in Presses.*—Patent dated April 15, 1862.—The nature of this invention consists in making a press with various adjustable motions, and so arranged that the plungers have an alternate reciprocating motion. The plates, being cut by one die, pass through the same, and are then moved by mechanism to the second die, where they are bent or stamped as required. The cam for moving this device is so constructed and arranged that time is allowed at each end of its motion for the article cut to drop into the blank carrier when it moves forward; and after the completion of its motion in the reverse direction, it remains stationary until the article is bent, or, if the

article is to be stamped, until the impression is made. When the cutting punch recedes from the die, the feed rollers move forward and draw the strip of metal the proper distance for the next cutting; this distance can be graduated to the one-sixtieth part of an inch, if desirable, by means of jam nuts and the levers.

Claim.—First, the bending device, figure 10, the shank 8 being made fast in the plunger D', figure 2, by means of the pin 12, and having a spiral spring 3, or its equivalent, working on and around the shank of the fixed bender 8, and pressing against the bottom of the plunger D' to keep the movable part of the bender E E parallel to the bottom of the fixed bender 8, except when bending the middle of the blank, and working in combination with the blank carrier F and bending bar H, as substantially set forth.

Second, the bending bar H and blank carrier F working simultaneously with each other and in combination with the bending die 19, the whole being constructed and arranged and operated as substantially described.

Third, the air chamber 41 in the bolster A, figures 13 and 17, the small holes 42 being drilled through the partition 17, for the purpose of drawing the blank down upon the said partition by means of an exhaust pump, or its equivalent, as specified.

No. 34,997.—D. R. FRASER, of Chicago, Ill., assignor to Himself, P. W. GATES, and THOMAS CHALMERS, of the same place.—*Improvement in Valves for Steam Engines.*—Patent dated April 15, 1862.—The use of the pendulous balance-block enables the valve to work nearly on a balance, the pressure of the steam above the enclosed part of the platform of the valve being borne by the balance-block. The spherical seat upon the bolt allows free motion to the block, but the springs and pin keep it in proper position. The weight of the packing frame causes it to press down upon the valve, so that the joints are kept steam-tight. The wedge acts to take up the slack, a slot being provided in it so, that by loosening the nuts the wedge can be lowered and the slack taken up.

Claim.—First, the combination and arrangement of the suspended and universally-moving balance-block E, gravitating frame or packing D D, and platform C of slide valve, substantially in the manner and for the purposes described.

Second, the vertical bolt F, with spherical seat on its lower end for suspending the balancing mechanism of the valve, substantially in the manner and for the purpose described.

Third, the combination of the vertical pins I, with spherical ends, and the bolt F F', and balancing mechanism, substantially in the manner described.

Fourth, the combination of the springs, bolt F F', pins I, and balancing mechanism, substantially in the manner and for the purpose described.

Fifth, the combination of the slotted wedge J, inclined projection K, connecting arm M, retaining nuts *c c*, and valve B, substantially in the manner and for the purpose described.

No. 34,998.—F. N. FROST, of New Britain, Conn., assignor to Himself and HENRY HASKINS, of the same place.—*Improvement in Coal Sifters.*—Patent dated April 15, 1862.—This invention consists in constructing the door and its hinge or pivot-joint in such a manner that it will close the discharge opening while the coal is being sifted in an ordinary wire cylinder, after which, the upper end of the door being pulled forward and turned down below the fulcrum pin at an angle, and then slid up against the back of the box, so as to completely cover the ash drawer and conduct the coal into any desired receptacle.

Claim.—The fulcrum guide *n s*, door *e*, in combination with a sifter *i*, substantially in the manner and for the purpose described.

No. 34,999.—A. S. HARDING, of Mount Hope, N. Y., assignor to Himself and A. S. DODGE, of the same place.—*Improvement in Machines for Raking and Binding Grain.*—Patent dated April 15, 1862.—This device is designed to gather up from the swath of grain, the proper quantity to form a sheaf, using straw or its equivalent for the band, the entire operations of gathering up the cut grain and forming it into a complete sheaf being performed by the machine. The device may be used as a distinct machine, or it may be attached to any reaping machine; and when so attached, the grain will be taken from the bed or platform of the reaper, upon which the rake of the reaper has placed it.

Claim.—First, the rotating rake for gathering up and presenting the grain to the clamp, in combination with the clamp, when they are constructed and operated substantially as described.

Second, the combination of means recited, or their equivalents, for seizing the straw to form the band from the box, and passing it around the grain in the clamp.

Third, the combination of means, or their equivalents, for forming the band and securing it around the grain in the clamp and completing the sheaf, substantially as set forth.

Fourth, the arrangement of the lever *c''*, the side rod *f''*, and the plate *h''*, having the hole *g''* for holding the rake's shaft, as and for the purpose described.

No. 35,000.—JOHN MAGEE, of Chelsea, Mass., assignor to NORTON FURNACE COMPANY, of Norton, Mass.—*Improvement in Cooking Stoves.*—Patent dated April 15, 1862.—The front part of the oven is inclined in such a manner as to form a chute, which extends under the grate and hearth, and serves to conduct ashes falling from the grate into a receptacle placed

within the ash chamber. By this arrangement the size of the oven is increased and ashes are prevented from collecting against its front part.

Claim.—The peculiar arrangement of the ash chamber and the oven chute with reference to the hearth, the horizontal grate and the oven, the said ash chamber being constructed with an opening, and such opening being provided with one or more doors, all substantially as specified and represented.

No. 35,001.—J. L. JONES, of St. Louis, Mo., assignor to Himself and W. D. PORTER, United States navy.—*Improved Defensive Armor for Water and Land Batteries.*—Patent dated April 15, 1862.—The claim and engraving explain the nature of this invention.

Claim.—First, metallic plates, as the defensive armor of ships and land batteries, when the plates have a flange at the edges and have intermediate flanges, and when the plates are applied in two or more tiers or thicknesses, so as to form recesses between them, also when the plates otherwise are constructed and applied substantially as and for the purposes set forth.

Second, the combination of armor plates which have a flange at each edge, and intermediate flanges, and are applied as described, with divided elastic cushions, substantially in the manner and for the purpose set forth.

Third, the combination of two or more tiers of angle plates constructed and applied as described, with intermediate cushions E, and foundation cushions D, substantially in the manner and for the purpose set forth.

Fourth, the combination of elastic washer cushions *c*, bolts F, angle plates A B, constructed and applied as described, cushions E, and casemate or side of a vessel, substantially as and for the purpose described.

No. 35,002.—JOSEPH SHORT, of Salem, Mass., assignor to CHARLES SHORT, of the same place.—*Improved Sling for carrying Blankets and Overcoats.*—Patent dated April 15, 1862.—This invention consists of an arrangement of straps by which an overcoat or blanket, when rolled into a compact form, can be sustained just above the small of the back, in a manner easy to the wearer and without constraint to the muscles of the chest and shoulders.

Claim.—As a new article of manufacture. the officer's overcoat and blanket sling, as and for the purpose described.

No. 35,003.—H. D. WALCOTT, of Boston, Mass. assignor to HORACE WILLIAMS, of Brook line, Mass.—*Improvement in Eyelet Machines.*—Patent dated April 15, 1862.—This invention consists of a combination of an eyelet punch and set, in one device, so that either can be used as desired. Owing to its peculiar construction, the strain is brought directly into a line passing through the middle of the pivot of the pincers, and thus all lateral strain is avoided. Pivoted on the under surface of the upper jaw E, a piece E, which has at one end a punch for making the holes in the material, and at the other end a die for setting in the eyelet. These parts are at different distances from the pivot, so that when the piece is turned on the pivot, end for end, the die end shall fall on different parts of the lower jaw adapted to receive the punch and set. The piece I, is retained in position by a stop which passes through the upper jaw, and is held down by a spring fastened on the outside of the jaw, but which can be lifted by a thumb piece V.

Claim.—The described improved eyelet set and punch combined in the piece E, being so pivoted to the jaw C, that when it is revolved the punch *d*, and die *f*, attached thereto, will fall on different parts of the jaw D, substantially as set forth.

No. 35,004.—J. O. WHITCOMB, of Brooklyn, N. Y, assignor to JOSEPH DODIN, of New York, N. Y.—*Improvement in Sewing Needle Cases.*—Patent dated April 15, 1862.—The object of this invention is to arrange needles in a case so that a single needle of any desired size may at pleasure be extracted from the case one at a time, by simply inverting it and turning a plate which is attached to the bottom of the case, so that the notches will coincide with the compartment which contains the needle of the required size. By holding the case sideways the needles will fall to one side, and then by holding it upright a single needle will pass out.

Claim.—A needle case having a graduated series of compartments, substantially as described. Also, in combination therewith, the plate Fig, 3, attached to the bottom of the case, and turning on the common centre *n*, and having the notch *e*, substantially as described.

No. 35,005.—E. H. WILLIAMS, of Clermont, Iowa, and D. R. W. WILLIAMS, of Werner, Wis., assignors to said E. H. WILLIAMS.—*Improvement in Excavating, Ploughing, and Grading Machines.*—Patent dated April 15, 1862.—This invention does not admit of a brief description; its nature will be understood from the claim.

Claim.—First, constructing the endless belts I M O, of a series of metallic plates *o*, connected together by joints formed of eyes *p*, which interlock into each other and are so swaged or formed as to receive their pins *q* at the inner sides of the belt, whereby the outer surfaces of the plates will be flush with each other, and projections formed at the inner side of the belts to mesh into toothed pulleys or wheels which are driven by the belts or by which the belts are driven, sustantially as shown and described.

Second, the combination of the adjustable part D, of the frame of the machine, with the adjustable caster-wheel E, and adjustable plough F, all arranged substantially as shown and described, for the purpose of insuring a steady movement of the plough at any angle or degree of inclination in which it may work.

Third, the wheel H, provided with two annular colters *l l*, and two or more annular bars *m m*, in connexion with the endless belt I, and endless pressure belt M, arranged in relation with each other and the plough F, to operate as and for the purpose specified.

Fourth, Providing the plough F with a yielding or elastic mold-board *i*, attached to the upper end of the share *d*, and arranged in relation with the belts I M, to operate as and for the purpose set forth.

Fifth, the combination of the chains J J *h' h'*, connected to springs, and arranged substantially as shown, for the purpose of driving or operating the pressure-belt M from the belt I, and preventing the belt M from being subjected to any undue pressure against the ascending slice of earth, while the chains J J are kept sufficiently taut to insure the perfect operation of the belt M.

Sixth, the employment of the laterally-adjustable rotating colters T, and shares U, arranged and applied to the part D, of the frame of the machine, and used in connexion with the wheel A, belts I M, and plough F, as and for the purpose set forth.

Seventh, the adjustable discharging spout P, attached to the upper part of the part A, of the frame of the machine, and in relation with the discharge end of the belt O, as and for the purpose described.

Eighth, the rotary beater, formed of the rotating shaft *s'*, and beaters *s'*, arranged in relation with the belt O to operate as and for the purpose set forth.

Ninth, the combination of two endless belts I M, when arranged relatively with each other, a wheel H, without the colters *l l*, and a plough F, so as to serve as elevators to carry up the slice of earth as it is cut by the plough.

Tenth, the employment or use of a wheel H, provided with annular colters *l l*, when so arranged as to perform the double function of a rotary-colter and a driving-wheel for operating the endless belt or belts and other working parts of an excavating machine.

No. 35,006.—Suspended.

No. 35,007.—ABEL BREAR, of Saugatuck, Conn.—*Improved Apparatus for discharging liquids from Kettles and other Vessels.*—Patent dated April 15, 1862.—This invention consists in the attachment of the covers and discharge pipe of the boiler to the main pipe which supplies steam or compressed air above the surface of the liquid in the vessel, by means of hollow arms or branch pipes, the connexion of the said branch pipes with the main pipe being of such a character as to permit the opening and closing of the cover without disconnecting it from the main pipe or disturbing its connexion therewith.

Claim.—The combination of the movable cover B, and discharge pipe C, with a steam or air pipe D, by means of one or more hollow connecting arms or branch pipes E E, in such manner as to effect the discharge of the vessel to which the cover is fitted by means of steam or compressed air admitted to the said vessel from the said pipe D, through the said hollow connecting arms or branch pipes, substantially as specified.

No. 35,008.—O. W. BAYLEY, of Somerville, Mass.—*Improvement in Breech Loading Fire-arms.*—Patent dated April 22, 1862.—Within a movable or swinging breech piece is fitted a sliding cylinder which is closed at its rear end to form a chamber for the reception of the charge. Through the rear end of the breech piece passes a screw provided with a thumb piece or handle, and made to press against the end of the sliding cylinder so as to cause the outer end of the latter to bind firmly against shoulders on the inner end of the barrel for the purpose of preventing the escape of gas when the gun is discharged, and also to compensate for the wear of the breech plug.

Claim.—The combination of the breech piece D, with the cylinder E, which is moved forward after the breech piece is in place, to tighten the joint at the rear end of the barrel, substantially in the manner described.

No. 35,009.—J. B. BOWEN, and J. E. BARKER, of Madison, Wis.—*Improvement in Harvesters.*—Patent dated April 22, 1862.—The rake head is supported on two arms which extend from and turn on the rake carrier, so as to give the rake a vertical reciprocating movement, to enable it in its return movement to be elevated clear of the platform. The rake carrier, which has a reciprocating horizontal movement on a vertical pivot, does not project far enough over the platform to offer any impediment to the falling grain. By means of a stop on the frame, striking against the cam projection, or one of the arms of the rake after the completion of its backward movement, the rake is elevated and held in that position by means of a spring catch on a lever pivoted to the carrier, catching in a notch on the wrist of one of the arms. This catch is released by the lower arm of the lever striking against a stop on the arm R, which is pivoted to the frame, and is connected by a lever to a rod extending within reach of the driver, so as to enable him to move the lever without effecting the disengagement of the rake, and thus stop the raking.

Claim.—The combination of the two projecting arms E E, of the rake head, the rake carrier G, and vertical pivot H, stationary on the frame of the machine, the rake hinging

around the rake carrier, and the rake carrier hinged around the pivot, when the rake carrier is so constructed and situated as not to extend over the platform, substantially as and for the purpose specified.

Also, the combination of the arm R, which bears the stop Q, with the lever S and rod *l*, arranged substantially as and for the purpose specified.

No. 35,010.—C. P. BROCKETT, of New Haven, Conn.—*Improved Lamp Burner.*—Patent dated April 22, 1862.—This invention consists in attaching the cone or deflector of the burner to a plate which is connected to the top of the burner by a pivot, so that the plate may be turned horizontally on and off from the burner, thereby rendering the wick tube accessible for the purpose of trimming and lighting the wick, and placing the same in the tube without detaching the chimney from the burner. In order that the lamp may be supplied with oil without detaching the burner from the lamp, a tube is fitted in the burner.

Claim.—First, the plate F, with cone G attached, pivoted to the plate E at the top of the burner, provided with a catch H, and arranged relatively with the wick tube B to admit of the plate F, with chimney attached, being shoved off from and on the burner for the purpose specified.

Second, the tube stopper *h* attached to the under side of the plate F, in combination with the cross-bar *i* secured to the plate E, and in such relation with plate F and cone G as to elevate plate F and stopper *h*, and admit of said stopper being raised out of and fitted in tube C by the movement of plate F, as set forth.

Third, the tube C, fitted in the burner A, in connexion with the movable plate F, arranged substantially as shown, to cover the tube when the burner is in use and the lamp lighted, and to expose the tube for filling the lamp when the plate F is shoved off from the burner.

No. 35,011.—WILLIAM BURGYES, of Chelsea, Mass.—*Improvement in Sweat Bands for Hats.*—Patent dated April 22, 1862.—On the outer surface of the ordinary elastic lining, which is arranged to have an air space between it and the body of the hat, is fastened an unelastic band. By this device the lining is caused to retain its proper shape, and the hat is also rendered more comfortable to the wearer.

Claim.—The described arrangement and combination of the unelastic and flexible band *c* with the head lining *b* and the air space *d*, arranged between the hat body and head lining, and for the purpose as set forth.

No. 35,012.—HIRAM CLARK, of Rochester, N. Y.—*Improvement in Skates.*—Patent dated April 22, 1862.—This invention consists in the employment of wooden foot pieces, which are bent by steaming or boiling, so that they will be rendered lighter and shorter at the point than when they are curved by cutting the wood across the grain, thus effecting a saving of time and material in their construction.

Claim.—The employment in skates of bent (by steaming or boiling) wooden foot pieces, for the purposes set forth.

No. 35,013.—W. R. CUNNINGHAM, of Brooklyn, Ohio.—*Improvement in Water Elevators.*—Patent dated April 22, 1862.—The springs 8 are adjusted under a sliding bearing in such a manner that when the bucket is full of water, its pressure upon the windlass is sufficient to compress the springs, and thereby bring the periphery of the flange of the windlass from out of contact with the friction rubber placed on a projecting arm above. But when the water has been discharged, the expansion of the springs brings the flange against the rubber and prevents the bucket from descending too rapidly. The velocity of the bucket in its descent is rendered uniform and the acceleration counteracted by the arrangement of the springs, which, when the bucket commences its descent, support the weight of the bucket and rope, but as the rope is unwound expand, thus causing the flange of the axle to bear against the friction rubber with a constantly increasing pressure.

Claim.—The self-regulating brake, composed of the springs 8 8 8, the sliding journal box 7, the rubber 11, used in connexion with the friction flange 10, the whole being constructed substantially in the manner and for the purpose specified.

No. 35,014.—G. W. DECHANT, of Berrysburg, Pa.—*Improved Rotating Meat Chopper.*—Patent dated April 22, 1862.—The radial cogs on the main cog-wheel are much less in number than the cogs on the block *j*, by which means the block is allowed periods of rest during its rotation, at which time the knives are in motion. After each interval of rest, a slight rotation is given to the block by means of the cog, and another portion of meat brought under the action of the knives.

Claim.—Moving the block A intermittently by means of the cogs *j* on the block A, and the radial cogs I″ on the face of the cog-wheel I, in combination with the cutters C K, when these parts are arranged and operated as set forth.

No. 35,015.—F. W. DEXTER, of Randolph, N. Y.—*Improvement in Box Setters for Wheel Hubs.*—Patent dated April 22, 1862.—The small end of the hub being set in the cone-shaped mortise of the cone piece, the head piece is brought down upon the square end of the hub, and the nuts turned so as to clamp and hold the hub firmly. The hub is kept in a perpendicular position by being set in the mortise, whose conical shape adapts it equally to hubs of different sizes.

Claim.—A clamp for holding the hub for boring, consisting of the head piece A, cone piece B, screw rods C, and nuts D, substantially as described.

No. 35,016.—WILLIAM ELLMAKER and C. HURST, of Earl Township, Pa.—*Improvement in Carriage Brake.*—Patent dated April 22, 1862.—The hinged lever is attached by one end to the cross-piece between the shafts, and has upon its extremity the brake block. The part A′ of the lever bears in the step staple upon the shaft. The lever is connected to a spring and rod upon the shaft. On the vehicle going down hill the action of the backing strap, or an eye on the spring rod, presses the rubber against the wheel, the action of the wheel keeping the rubber down. In backing, the rubbers are forced against the wheels, and then raised into the upper step of the staple, and are thus thrown out of the way of the wheel. When the forward motion is made, the lever falls into the lower step, where it is held firmly and rattling prevented.

Claim.—The arrangement of the jointed lever A B, the step staple *a b*, and the jointed rod F, combined and operated substantially as set forth for the purpose specified.

No. 35,017.—J. O'FARRELL, of New York, N. Y.—*Improvement in Wheel Vehicles.*—Patent dated April 22, 1862.—One of the slides which is connected to the upper part of the axle moves on a shaft at right angles to the perch, and is fastened to arms extending out from the bolster; the other slide is also connected to the axle by an arm which moves on a shaft parallel to the perch. By this device when the vehicle is turned the slide D moves either to the right or left, and the ring bolt on which the axle turns, and which is the pin securing the slide G to the curved piece L, moves forward, thus enabling the vehicle to be turned in a small space, and at the same time allows the front and rear axles to be placed near together without any danger of their coming in contact when the wheels are turned.

Claim.—The connecting of front axle F to the perch or reach B by means of the two slides E G placed respectively on the shafts D H, and connected with the axle F, substantially as shown, for the purpose set forth.

No. 35,018.—HOWARD GILL, of Dedham, Mass.—*Improved Folding Bedstead.*—Patent dated April 22, 1862.—The leaves attached by hinges to the under side of that part of the bedstead which when it is folded comes uppermost, allows the piece of furniture to be used as a table, the leaves being unfolded and retained by a proper support. Under the part H is placed the trundle bed, which is simply a rectangular box provided with slats, and which may be drawn out when desired for use.

Claim.—The bedstead A, formed of two parts B C connected by hinges, and provided respectively with an adjustable headboard *e* and a fixed footboard *h*, in connexion with the folding or hinged leaves *i j* attached to the bottom *d* of the part C of the bedstead, as and for the purpose set forth.

Further, the combination of the folding bedstead A, leaves *i j*, and trundle bed D, arranged as set forth.

No. 35,019.—W. W. GOULD, of Skowhegan, Maine.—*Improvement in Vent Holes for Ordnance.*—Patent dated April 22, 1862.—This invention relates to an improvement in the vent of fire-arms. The object of the two obliquely arranged tubes, is to convey the fire to two points in the charge, and thus insure its more perfect combustion and increase the force of the discharge.

Claim.—The combination of the two obliquely arranged flanged tubes B B′, having their flanges bevelled as shown at *e*, and the covering plate D having an aperture *i*, the whole arranged and operating substantially as and for the purpose set forth.

No. 35,020.—JEREMIAH HALL, of Granville, Ohio.—*Improvement in Reaction Car Brakes.*—Patent dated April 22, 1862.—In this invention the rotation of one of the axles is communicated by means of the engagement of a pawl and ratchet wheels to rotating drums on which are wound chains connected to a series of springs, so that when it is desired to stop the car, its momentum will be taken up by them. When it is desired to start the car, the expansion of the springs is made to impart an impetus to the rotation of the axle. When the momentum of the car is too great to be all taken up by the spring an ordinary friction brake is brought against the rear wheels.

Claim.—First, the combination with a railroad car axle of the sleeve E, the ratchet wheels D D′, and the drum wheels F F′ and pawls I I′, substantially as described.

Second, the combination of the springs R with the drum wheels F F′, the pulleys W W′, and chains H H′ H″, substantially as described.

Third, the combination of the treadle or foot lever M M, levers X X′, and their connecting chain and rod, in combination with the stop S S′, and for the purpose as substantially described.

Fourth, the combination of the reaction car brake, as claimed, with the friction car brake P and chain O, as described.

No. 35,021.—N. D. HARTLEY and M. S. MOREHOUSE, of Quincy, Ill.—*Improvement in Coffee Pots.*—Patent dated April 22, 1862.—The coffee is introduced into the bottom of the inner vessel and rests upon the strainer, and is thus exposed to the action of the water in the coffee pot. The steam from the pipe H passes into the vessel and is there condensed. The pipe J conducts surplus steam into the upper chamber and prevents the lid of the inner vessel from being removed by the pressure.

Claim.—As an improved article of manufacture, a coffee pot provided with pipes J H, chamber G, vessel D, strainer E, and box F, and otherwise made as shown and described.

No. 35,022.—J. H. HASCALL, of Corunna, Mich.—*Improved Medicine for Miasmatic Diseases.*—Patent dated April 22, 1862.—The material used in this invention is the bark of the white or black ash, from which either a tincture or solid extract is prepared, to be used in miasmatic fevers.

Claim.—The composition made of the material, substantially as described and for the purpose set forth.

No. 35,023.—A. C. HOAG, of Clinton, Ill.—*Improved Broom.*—Patent dated April 22, 1862.—The oval plates which are attached to the handle are connected together by rivets and screw bolts. Broom corn is inserted between these plates, which are then screwed firmly together so as to hold the broom securely. By this means a durable broom is obtained which, when desired, can easily be detached from the handle.

Claim.—The method of fastening brooms to the handles thereof by means of the plates C and D, connected by the rivets *b c* and the screw bolts *a*, constructed and operating substantially as set forth.

No. 35,024.—JASPER HOOPES, of Philadelphia, Pa.—*Improved Car Trucks.*—Patent dated April 22, 1862.—The object of this invention is the construction of the car truck in such a manner as to facilitate the turning of curves, so as to avoid the wear of both rails and running gear. The invention does not admit of a brief description.

Claim.—The combination of the plates E E, semicircular projections F F, frame G, bands *f*, bar H, and guides *g*, with the axles B C C, in the manner and for the purpose shown and described.

No. 35,025.—SHELDEN HULL, of Oxford, Conn.—*Improved Washing Machine.*—Patent dated April 22, 1862.—By the vibration of the swinging bar, the plungers are caused to rise and fall alternately upon the clothes, thus compressing them in the suds, while at the same time, the obliquity of the lower edge of the plates of one of the flanges gives a rotary motion to the clothes, causing fresh surfaces to be acted upon successively.

Claim.—The V-shaped box A, in combination with the swinging bar E and the plungers G G′, attached thereto and working on the inclined ends *f* of the box, substantially as and for the purpose set forth.

Further, constructing the plungers G G′ of a series of parallel plates or strips *c*, the plates or strips *c* of one plunger G having their lower edges at right angles, with the end *f* on the box on which their plunger works, and the plates or strips *c* of the other plunger G′, having their lower edges forming an acute angle with the end *f* on the box on which their plunger works, substantially as and for the purpose specified.

No. 35,026.—LUCINDA HUMPHREY, of Tipton, Iowa.—*Improvement in Skirt Protectors.*—Patent dated April 22, 1862.—This invention consists in the employment of a strip of oiled silk or muslin attached by means of steel hooks to the bottom of the petticoat, and which is of sufficient width to double over the lower edge of the skirt and extend up some distance on its upper and lower surface. It is worn under the skirt when not needed, but in wet weather the dress can be tucked into the oiled silk, and thus an efficient protection be obtained.

Claim.—A skirt protector made substantially as described and of any water-proof material, in combination with the lower portion of the petticoat.

No. 35,027.—M. J. KNOX, of Knox Corners, N. J.—*Improved Clothes Frame.*—Patent dated April 22, 1862.—This invention consists in attaching supplemental frames to the opposite sides and near the top of a main frame, whereby its capacity is nearly doubled, and at the same time the frame occupies, when standing or folded up, but little more room than the main frame alone.

Claim.—A clothes frame composed of the three conjoined, but independent and separable frames A B F G with arms J, constructed, combined, and operating as shown and described.

No. 35,028.—T. S. LAMBERT, of Peekskill, N. Y.—*Improvement in Shirts.*—Patent dated April 22, 1862.—The nature of this invention will be understood from the claim and engraving.

Claim.—A shirt with the bosom detached from the body at both sides, a part of the length downward from the upper extremity of the bosom and opening and closing as a flap, the shirt body and band being open in front beneath the bosom, the band of the shirt and the band of the bosom either or both being kept in place by elastic bands or cords, the whole substantially as set forth.

No. 35,029.—W. A. LIGHTHALL, of New York, N. Y.—*Improvement in Portable Water Condensers.*—Patent dated April 22, 1862.—This invention is designed as an improvement upon the patent granted to said Lighthall, December 17, 1861, and it consists in combining the condenser with a series of tubes placed beneath the drip plate, for the purpose of cooling the condensed water after passing through the drip plate into the pipe reservoir, prior to its being conducted to the tank or other receptacle, placed so as to receive it.

Claim.—The combination with the drip reservoir A and dip plate E, of the series of cooling tubes B, arranged and operated as and for the purpose set forth.

No. 35,030.—J. W. LYON, of Brooklyn, N. Y.—*Improvement in Padlocks.*—Patent dated April 22, 1862.—The first part of this invention will be understood from the claim. The pin upon the projecting part of the shackle is so arranged that it will not fit the groove in the dog, and thus allow the movement of the shackle, unless the tumbler has been moved by the proper key. The tails or detectors are so arranged relatively to the projecting part of the heel of the shackle that if the tumbler catches are moved further than is necessary to release them from the front of the shackle, the tails are raised sufficiently to impede the movement of the heel of the shackle. This arrangement prevents the lock from being opened without the proper key.

Claim.—First, combining with the shackle two separate and independent sets of tumbler catches, one set to lock the heel and the other set to lock the front of the shackle, when arranged so as to overlap each other in such a manner as that the key shall come in direct contact with each of them at a point intermediate between their respective fulcra or pivots, and by raising them up, release them from the shackle, as described.

Second, in combination, the grooves *g* in the dogs *s*, and the flanges or pins on the projecting part of the heel of the shackle, substantially as and for the purpose described.

Third, in combination, the projecting part of the heel of the shackle, and the tails or detectors of the dogs *s*, which take into the staple, or front of the shackle, substantially as and for the purpose described.

No. 35,031.—J. S. MARSHALL, of West Greenville, Pa.—*Improvement in Bee Hives.*—Patent dated April 22, 1862.—The sides of the outer hive are hinged together and so arranged that when it is desired to inspect or manipulate the contents of the hive it can easily be spread open.

Claim.—The combination of the external and internal cases of the hive, when both are constructed and arranged as shown and described, so as to be capable of being spread open, as and for the purpose set forth..

No. 35,032.—G. W. MORGAN, of Mount Vernon, Ohio, C. H. TYLER and JOHN MCCLAVE, of New York, N. Y.—*Improvement in Hammock Tents.*—Patent dated April 22, 1862.—This invention consists in the combination of the upright side bars, canvas cover, portable trestles or supports, transverse bars, and the suspended adjustable sacking, in such a manner that in the day time, the lower transverse bar, the end trestles, and the sacking can be readily removed without disturbing the tent cover or its supports, and an unobstructed enclosed space extending from end to end of the tent secured, and in the night the lower transverse, the trestles, or end supports, and the sacking readily readjusted to their former positions without disturbing the tent cover, thus forming a series of suspended hammocks for sleeping purposes. The lower transverse bar is provided with dovetails fitting into sockets on the inner sides of the vertical post, and the sacking is provided at each extremity with eyes which are fastened to pins on the trestles and transverse bar. The invention also consists in the combination with the transverse bar, of trestles, whose parts are hinged together and kept apart by stay hooks when in use. These trestles may be disconnected so as to be readily packed in a small compass, with the transverse bar and other supports of the tent, for transportation.

Claim.—First, the combination of the upright side bars A A, canvas cover D, portable trestles or supports F or G, transverse bars B C, and the suspended adjustable sacking strips E E, in the manner and for the purposes described.

Second, the combination with the suspended sacking strips E, and the portable transverse bar C, of trestles F, constructed in the manner specified, for the purpose set forth.

No. 35,033.—Cancelled.

No. 35,034.—W. T. NICHOLS, of Rutland, Vt.—*Improved Ironing Machine.*—Patent dated April 22, 1862.—The nature of this invention is explained by the claim and engraving.

Claim.—First, a smoothing iron revolved horizontally by machinery, and capable of adjustment at pleasure upon any part of the ironing table, and also upon the top of the fire-box, substantially as described.

Second, heating rollers externally while they are revolved, for the purpose of ironing, substantially as set forth.

Third, I claim so applying a heated roller, for the purpose of ironing, that it shall prevent the too rapid forward movement of the garment, at the same time that it performs the act of ironing, substantially as described.

Fourth, so applying heated rollers for the purpose of ironing that they shall revolve at varying rates of speed, for the purpose set forth, substantially as described.

No. 35,035.—CHARLES O'HARA, of London, England.—*Improved Propeller.*—Patent dated, April 22, 1862.—This invention consists of a form of propeller more especially designed to be used in shallow water. It is constructed of a hollow semi-cylinder of iron mounted upon a vertical or horizontal axis, its surfaces being corrugated. To the upper part of the shaft is attached a toothed wheel. An arm is connected to the piston-rod and provided with a slot through which works a tooth fitting into one of the spaces between the teeth of the wheel, and thus enabling the piston-rod to give to the propeller an oscillatory motion. By means of a lever the propeller can be moved so as to bring the corrugated surface in front or on the sides, thus enabling it to back or turn the vessel. When the propeller is arranged vertically, the upper surface is made to form a complete circle.

Claim.—The arrangement and operation of the semi-cylinder oscillating propeller within the concave *a a*, substantially as shown and described.

Having the radial face of the said propeller provided with corrugations *b*, as shown and described.

Also, the combination with the said propeller of the circular plate *c*, as shown and described.

No. 35,036.—GEORGE PALMER, of Littlestown, Pa.—*Improvement in Metallic Grinding Mills.*—Patent dated April 22, 1862.—The longitudinal grinding plates are secured in dovetailed recesses on the cylinder. The advantages of this form of grinding mill are the thinness and lightness of the plates, by which they are enabled to be constructed of the strongest and hardest material; their facility of removal, thus enabling new plates to easily be substituted when the others are worn or dulled; and also in having them separate, so that they can yield readily to allow the passage of such substances as cannot be readily crushed.

Claim.—The movable, ventilated, longitudinal grinding-plates, attached to a revolving cylinder, in sections, in the manner described, in combination with the concave grinding-plates secured to the covering, and made yielding and adjustable by springs and set screws, or their equivalents, in the manner as and for the purpose set forth.

No. 35,037.—JOHN PHELPS, of Laporte, Ind.—*Improved Washing Machine.*—Patent dated April 22, 1862.—This invention consists in having the bearings of the rubber shaft attached to a sliding frame which is connected by a cross-tie to a spring bar, one end of which is fastened to the framing under the washing vessel. Upon this spring bar is placed an adjustable weight by which the force of the spring can be so adjusted as to regulate the pressure of the rubber upon the clothes.

Claim.—The reciprocating, partially-rotating rubber D, and the concave C, in combination with the spring H, adjustable weight I, and sliding frame F, all arranged for joint operation as and for the purpose set forth.

No. 35,038.—E. A. PIERCE, of Brighton, Mass.—*Improvement in Buckles.*—Patent dated April 22, 1862.—In this buckle the strap is attached to a roller, so that by turning the latter by means of a suitable key or wrench, the strap is tightened. The roller is provided with a ratchet and pawl, by which it can be held firmly, and the strap prevented from unwinding; the object being to procure a buckle by which a strap can be drawn tighter, with less force, than the ordinary buckle.

Claim.—As a new article of manufacture, a buckle constructed substantially as described, with its frame A, slotted roll B, and ratchet and pawl *d e*, for the purpose described.

No. 35,039.—SUSAN D. PINKHAM, of Fond du Lac, Wis.—*Ventilator for Petroleum Oil Lamps.*—Patent dated April 22, 1862.—This invention consists in providing the upper parts of the lamp or burner with an aperture in which is inserted a metal tube, by which communication of the gas inside the lamp with the outer air is obtained, and the escape of any gas which may accumulate in the lamp is insured at a distance sufficient to prevent ignition and consequent explosion, the excessive flow of liquid from capillary attraction being also prevented. The same results are obtained by the inverted cup placed over the burner.

Claim.—The combination of the curved tube, inverted cup or disk, with a lamp, substantially in the manner and for the purpose set forth.

No. 35,040.—A. R. REESE, of Phillipsburg, N. J.—*Improvement in Cutting Apparatus for Harvesters.*—Patent dated April 22, 1862.—Upon the upper surface of the lower member of each guard finger is placed a steel plate having a sharp cutting edge, over which the cutter plate revolves. The finger beam is clasped between the shank of the finger and the face plate, so that plates can readily be removed or replaced when desired.

Claim.—The combination and connexion of the finger beam A, guard fingers B, and face plate C, by means of the bolts *a*, when the whole are constructed, arranged, and operated as described, in combination with a reciprocating cutter, for the purpose set forth.

No. 35,041.—A. R REESE, of Phillipsburg, N. J.—*Improvement in Finger Beam for Harvesters.*—Patent dated April 22, 1862.—This invention consists in so connecting the two sections of the finger beam by means of an overlapping brace-bar under the sections, and an overlapping plate above the beam, that the latter shall be firm and rigid, so as to resist strains, and yet its action be prevented from being impeded by the braces.

Claim.—The combination in a finger beam of the two sections A and B with the brace-bar C and overlapping plate E, when constructed and connected substantially in the manner and for the purpose described.

No. 35,042.—THOMAS SHAW, of Philadelphia, Pa.—*Improvement in Tobacco Pipes.*—Patent dated April 22, 1862.—The inner bowl is provided with an opening communicating with the annular chamber, opposite to which is an opening connecting the annular chamber with the main bowl and stem of the pipe. The smoke, therefore, in passing out from the inner bowl, comes in contact with its heated surface, and is thereby deprived of much of its nicotine, and rendered more pure and mild.

Claim.—The annular chamber D, between the inner bowl C and the outer bowl B, the said chamber having vents *x y* arranged in respect to the vent *m*, as and for the purpose set forth.

No. 35,043.—J. H. SIMONDS, of New York, N. Y.—*Improvement in Heaters.*—Patent dated April 22, 1862.—In this furnace the products of combustion are brought in contact with air-tubes F, and then, being caused to take a downward direction by the deflector, pass through the draught tubes into the dome-shaped chamber, and then out through tube L. The tube K, being contracted at its lower part, allows the soot to fall into the chamber D, but is not large enough to admit of a draught passage.

Claim.—First, securing the tubes F in the hot-air chamber D, by means of the flanches *c* on the upper ends of the tubes, fitted in sand in recesses *d* in the top plate *e* of the hot-air chamber, and by having the lower ends of the tubes fitted over vertical tubular projections *h*, on the bottom plate *i* of the hot-air chamber, and within sand, in recesses *j*, which surround the tubular projections *h*, substantially as set forth.

Second, The draught pipe K, having its lower part *s* of conical form, with an opening *o* at its lower end, in connexion with one or more draught tubes H and a chamber J, or its equivalent, arranged in relation with the hot-air chamber D, with or without deflector G and smoke-pipe L, to form a self-cleaning device, as set forth.

No. 35,044.—EZEKIEL SMITH, of Cold Spring Harbor, N. Y.—*Improvement in Harvesters.*—Patent dated April 22, 1862.—In this invention the cutters are secured to the bar by headed pins passing through slots having one end enlarged, or by pins having grooves on the sides which fit the bevelled edges of the narrow part of the slot, and are held firmly in position by the pressure of the oblique-sided end cutter which acts as a wedge. This arrangement allows of the ready removal and adjustment of the cutters.

Claim.—Attaching the cutters B to the bar A, by means of the longitudinal adjustable cutter B′ on the bar A, provided with an oblique inner side *g* at its back part, and abutting against an oblique side *b* of its adjoining cutter B, in combination with the pins *c* on the bar A and grooves *b* in the cutters, and with or without the bar C, substantially as described.

No. 35,045.—J. M. TABER, of Greenwich, N. Y.—*Improvement in Hay Elevators.*—Patent dated April 22, 1862.—The two forks are united at their upper extremities by a joint, and are prevented from coming too closely together by a spring placed between them. A block is placed between the forks, which may be attached to one of them by a bar and hook, and are easily detached by releasing a catch to which a rope is fastened, so that it can be readily operated when it is desired to spread the two forks asunder. Two ropes which are united above the head of the fork are so arranged (one passing over the pulley on the block, and attached to the opposite tine, the other being fastened to the block and passing over a pulley on the other tine) that when the load is raised the tines of the fork are made to hold it closely.

Claim.—The combination of the gang-forks A A, united as described, with the block G and ropes or chains E and F, in the manner and for the purpose specified.

No. 35,046.—WILLIAM TANSLEY, of Salisbury Centre, N. Y.—*Improvement in Tools for Paring Horses' Hoofs.*—Patent dated April 22, 1862.—This invention is intended to facilitate the operation of paring horses' hoofs. The jaw end of the levers is placed against the outer edge of the hoof, when, by closing the levers, the knife is made to cut the rim of the hoof transversely at any point, as may be desired.

Claim.—As a new and improved article of manufacture, a butteris or hoof-paring implement, formed of the two levers A B, connected by a fulcrum pin *a*, and provided respectively with a jaw *b* and knife C, substantially as shown and described.

No. 35,047.—WILLIAM THOMSON, of Detroit, Mich.—*Improved Apparatus for Evaporating Saccharine Juices.*—Patent dated April 22, 1862.—This invention consists in the arrange-

ment of a pit dug in the ground or of a chamber built up of brick, provided with suitable air holes and a damper, and with a conical arched spout to receive the stalks and refuse of sugar-cane, in combination with an evaporating pan, which is furnished with a series of heating tubes, in such a manner that they can conduct the heat derived from the combustion of the refuse and stalks in said pit, through the pan, or not, as may be desired. The invention further consists in the arrangement of a reciprocating scraper acting on the exterior surface of the heating tube and bottom of the pan in such a manner that the juice is prevented from sticking to the heated surface.

Claim.—First, the arrangement of the pit A, with the conical arched spout *b*, damper *c*, and air-holes *c*, in combination with the pan B, provided with heating tubes *d*, all arranged substantially in the manner and for the purpose shown and described.

Second, the employment or use of the reciprocating scraper E, in combination with the heating tubes *d* and pan B, as and for the purpose specified.

No. 35,048.—J. C. TILTON, of Geneseo, Ill.—*Improvement in Ordnance for use under Water.*—Patent dated April 22, 1862.—Upon the top of the cylinder is placed a valve so connected by levers to the sliding breech-pin that the return of the breech-pin to its proper place causes the valve to open.

Claim.—The combination of the valve D, fitted to the opening C and the sliding breech-pin K, constructed and operated, substantially as described, through crank H and its connexions.

No. 35,049.—J. S. TOPHAM, of Washington, D. C.—*Improved Slide for Harness.*—Patent dated April 22, 1862.—This invention is designed as a substitute for buckles. The plate being placed upon the strap, the pin is fastened in a hole. The plate is then inserted in a box, and flanges on each of the plates prevent them from being drawn out.

Claim.—The employment of the spring-plate B and box A, constructed and used substantially as and for the purpose specified.

No. 35,050.—J. R. TUNNICLIFF, of Van Hornesville, N. Y.—*Improved Fire Alarm.*—Patent dated April 22, 1862.—In the barrel is placed a small charge of powder, and projecting from the barrel is a quickmatch tipped with some composition which will ignite at a certain temperature. This instrument is fixed in any convenient situation in a room, and should a fire occur, the increase of temperature will cause the match to inflame, explode the powder, and thus arouse the inmates of the house.

Claim.—As an improved article of manufacture, a fire-alarm, composed of a barrel *a* and quickmatch *b*, combined and operating substantially as shown and described.

No. 35,051.—A. C. TWINING, of New Haven, Conn.—*Improvement in Apparatus for Cooling and Freezing.*—Patent dated April 22, 1862.—This invention will not admit of a brief description.

Claim.—First, the condensing pump and condenser, in combination with the restorer, whether with or without the gas pump and reciprocating vessel between them and the escape pipe. The gas pump and precipitating vessel, in combination with the restorer, whether with or without the condensing pump and condenser intervening, and the employment of any cold surface of the vacuum vessel, or of the circulating pipes, or the vapor pipe, as part of a precipitating vessel, or of a condenser in any way, substantially the same as above.

Second, the use of cloths, as above, or other plates equivalent thereto, in combination with a distributing funnel, or any distributing plate or arrangement for the liquid; also the use of the colanders in a series, all substantially as above, and in combination with a restorer.

Third, the above diaphragm arrangement for arresting mist or vesicles from vapor, in combination with an evaporating apparatus.

Fourth, the clarifier, in combination either with the circulating cold current or the recondensed liquor from the restorer.

Fifth, the combination of a vacuum vessel and a liquid cooler therein, with a pump or pumps to draw out from the vacuum vessel and throw back in a continuous circulation that freezing or refrigerating liquid.

Sixth, the connexion of the escape pipe *s s*, or of any escape or leak outward, with a cavity surrounding any part leaking inward, to obviate loss of either, as above.

No. 35,052.—J. A. WHALEN, of Brooklyn, N. Y.—*Improvement in Revolving Fire-arms.*—Patent dated April 22, 1862.—Through the centre of the breech passes a pin *b*, which is surrounded by a spiral spring that tends to draw the pin backwards. In the rear of the pin *b*, and in a line coincident with the axis of the same, is a pin *c*, also provided with a spring, which tends to force it forwards against the pin *b*, the latter passing into a recess in the cylinder frame, so as to hold the same in position. By withdrawing the rear pin, the forward pin springs back and allows the cylinder to be turned.

Claim.—The two pins *b c*, and their springs *d* and *g*, applied, in combination with each other and with the cylinder and cylinder frame, substantially as and for the purpose specified.

No. 35,053.—DYER WILLIAMS, of Syracuse, N. Y., assignor to Himself and H. C. SILSBY, of Seneca Falls, N. Y.—*Improvement in Fire Engines of Locomotives.*—Patent dated April 22, 1862.—This invention consists in placing upon the top of the boiler of the locomotive a fire engine, which can be used in case of fire near the railroad. Steam is furnished by the locomotive, and water is obtained from the tank of the tender.

Claim.—The combination of a fire engine with a locomotive engine for railroads, substantially as and for the purposes set forth.

No. 35,054.—W. E. WORTHEN, of New York, N. Y.—*Improved Faucet.*—Patent dated April 22, 1862.—The nature of this invention is explained by the claim and engraving.

Claim.—First, the combination, with the plug, of a faucet of locking pistons, vibrating in lines perpendicular to the plug, the combination being substantially as specified, and the pistons being arranged on the faucet, as set forth.

Second, the omission or cutting away of the metal at the head of a faucet, which is provided with a plug so bored, as described, that liquid shall pass through the bore of the faucet, and then through and out of the plug at right angles, or nearly so, to its former course, such omission or cutting away of the metal to be substantially to the extent and for the purpose described, and the faucet being so constructed that the liquid does not pass through the cavity formed by the omission or cutting away of the metal.

No. 35,055.—NATHAN AMES, of Saugus Centre, Mass., assignor to Himself and NATHANIEL EVANS, jr., of Boston, Mass.—*For a Self-Feeding Card Printing Press.*—Patent dated April 22, 1862.—The nature of this invention will be understood from the claim. Its construction and operation do not admit of a brief description.

Claim.—First, a rotatory, oscillating, reciprocating type-bed and distributor, in combination with a rocking platen, substantially as described, and for the objects specified.

Second, the slide K, combined and arranged substantially as described, and for the purpose of rocking the platen and keeping the type-bed parallel with it.

Third, attaching the inking rollers to the continued axis N of the crank shaft, causing them to rotate with it, and carrying the type-bed and distributor in a circle round said roller, substantially as and for the object specified.

Fourth, so arranging the card-feeding apparatus on the top of the rocking platen that the rocking of the same, in combination with the bail S, shall feed down the cards at the proper time, substantially as set forth.

Fifth, constructing the feeding plate R with separate fingers *r*, and causing them to slide in grooves between the raised strips *q*, to prevent the face of the card from being soiled or scratched by coming in contact with that portion of the metal subjected to friction, substantially as described.

Sixth, bevelling the ends of the fingers *r*, so as always to pass under the edge of the card and bring it up against the shoulder *c*, and prevent the latter from ever catching on it more than one card at a time, substantially as described.

Seventh, making the shoulder *c* somewhat inclined, so as to form an acute angle with the surface of the raised strips *q*, substantially as described and for the objects specified.

No. 35,056.—PIERRE BOISSET, of Paris, France, assignor to Himself and BARNARDO ANTOGNINI, of New York, N. Y.—*Improvement in India-rubber Heels of Boots and Shoes.*—Patent dated April 22, 1862.—In order to prevent the wearing away of the India-rubber heel, one or two frames, with metal points attached, are incorporated into it in such a manner that the ends of said points, which may be round, square, or of any other shape, may come flush with the bottom of the heel.

Claim.—Making the heel piece *s* of an India-rubber sole with a frame or frames *m*, provided with points *o* incorporated therein, in the manner and for the purpose substantially as set forth.

No. 35,057.—PIERRE BOISSET, of Paris, France, assignor to Himself and BARNARDO ANTOGNINI, of New York, N. Y.—*Improvement in Boots and Shoes.*—Patent dated April 22, 1862.—This invention consists in incorporating in the caoutchouc soles used for boots and shoes a metal plate, or small pieces of metal pierced with a suitable thread-hole for the reception of screws, by which the upper leather is securely fastened to the sole.

Claim.—The combination with a plate or nut *a*, when the same is imbedded or incorporated within the India-rubber or caoutchouc sole while being made, of a screw, so arranged and operating in connexion with said plate as to allow of the sole being screwed up and fastened to the upper leather, substantially in the manner and for the purpose specified.

No. 35,058.—C. S. BROWN, of Homer, N. Y., assignor to Himself and J. H. KENNEDY, of the same place.—*Improved Portable Sawing Machine.*—Patent dated April 22, 1862.—The saw is connected with the fly-wheel so as to receive a reciprocating motion. The log is held firm by a dog on the arms, which are attached to the uprights of the main frame. When it is desired to move the machine, the frame is brought into a horizontal position, the arms extended out, and secured by the clamping hook, so as to serve as handles for trundling the machine upon its fly-wheel.

Claim.—The combination and arrangement of the frame A A, gate D, dog-arms L, fly-wheel and crank G F, and saw K, substantially in the manner and for the purpose shown and described.

Also, in combination with the described machine, the clamp hooks *e*, or equivalent device, for holding the dog-arms L L rigidly to the frame A A, to serve as levers for trundling the machine on the fly-wheel G, substantially as set forth.

No 35,059.—J. W. DOUGLAS, of Middletown, Conn., assignor to W. & B. DOUGLAS, of the same place.—*Improvement in Pumps.*—Patent dated April 22, 1862.—The valve chest is attached to the pump cylinder near its top, and communicates with the pump cylinder by means of an opening near its bottom. The valves are arranged in two sets, so that as the piston moves up and down, water is made to flow in either below or above it, and is also forced out through the eduction valves by the same motion. By this arrangement a continuous stream of water is made to flow around the piston, so that its packing is always kept soft and pliable, and at the same time the valves are so situated as to afford easy access for purposes of repairs or inspection. The floor of the horizontal passage through which the water passes from the induction openings is made at the same operation with the casting of the valve chest and roof, by placing a sheet of tin in the proper position, and allowing the metal designed to constitute the floor to flow upon it.

Claim.—The combination of a vertical pump cylinder, the valve chest in position, as described, and the lower end of the cylinder being made imperforate, substantially in the manner and for the purpose set forth.

Also, the use of a tinned iron plate P P, to aid in forming the floor of the horizontal passage O2 O2, extending from the front to the rear of the valve chest, substantially in the manner and for the purpose described.

No. 35,060.—WILLIAM HESTON, of Bedford, Ohio, assignor to A. H. COMSTOCK, of the same place.—*Improvement in Horse-powers.*—Patent dated April 22, 1862.—The crown wheel is kept down upon the pinion wheel by means of rollers attached to adjustable standards provided with slots, through which pass the bolts by which they are attached to the main frame, and are thus allowed a slight vertical motion. The springs operate to press the standards down, but their elasticity allows them to yield a little, and thus prevent injury to the crown wheel from any sudden strain.

Claim.—The self-adjustable standards H and springs I, in combination with the rollers K, when these several parts are arranged in their relation to the crown wheel B and pinion D, as and for the purpose specified.

No. 35,061.—W. H. MATTHEWS, of Chelsea, Mass., assignor to UNION GLASS CO., of Somerville, Mass.—*Improvement in Glass Deflectors for Lamps.*—Patent dated April 22, 1862.—The flanch of the glass deflector rests upon a ring, and is covered by an annular cap. This cap has extending out from its inner sides two projections opposite each other, on which the base ring rests, and is thus secured to the cap, the said ring having notches cut in it to enable it to slip over the projections when it is desired to separate it from the cap. The chimney is made to rest on the rim of the metallic cap, thus preventing it from breaking the glass flanch, and by the use of this support the glass deflector is held firmly in place.

Claim.—The described mode of constructing the glass deflector holder, viz., of the separate cap and base rings provided with means of connecting them as set forth, in order that they may be applied to the glass deflector and its flanch, as specified.

No. 35,062.—STUART PERRY, of Newport, N. Y., assignor to C. H. A. CARTER, of New York, N. Y.—*Improvement in Tread Horse-powers.*—Patent dated April 22, 1862.—This invention consists in using, in connexion with what are known as tread or treadle horse-powers, two or more interlaced treadles or treadle-frames, one of which shall be acting, whilst the other is returning to its place, and so on alternately under the feet of the horse or horses, as they walk upon their interlaced treadles, and thus producing a motion that may, by any well-known mode, be transmitted to any machinery which is to be driven by it.

Claim.—First, the use of two or more interlaced reciprocating treadles, to be operated upon by a horse or horses, for the purpose of making a horse-power machine, substantially such as described.

Second, in combination with two or more reciprocating interlaced treadles, the cams underneath them for bringing them alternately into contact with, and lowering them away from, the feet of the horses, substantially as described.

Third, in combination with two or more treadles acted upon alternately by the feet of the horse or horses, the racks and segmental gears for producing a continuous rotary motion out of the alternate reciprocating motion of said treadles, substantially as described.

Fourth, returning each of the treadles, after it has completed its working traverse, to its normal working position by means of the mechanism described and represented, or its substantial equivalent.

No. 35,063.—STUART PERRY, of Newport, N. Y., assignor to C. H. A. CARTER, of New York, N. Y.—*Improvement in Circuit Horse-powers.*—Patent dated April 22, 1862.—This invention consists in the use of one or more endless belts or bands in horse-power machines, to which the horses are hitched; and the power of the team is communicated through these ropes or bands to a force-transmitting pulley or shaft, whence it may be taken to any machinery to be driven by it. The invention also consists in providing suitable appliances for keeping this travelling rope or band in contact with the pulley, whether said rope has a bite or turn around the shaft or pulley, or whether it partially encircles it.

Claim.—In circuit horse-powers, the hitching of the team or teams to an endless belt or band, that travels around with the team, for the purpose of transmitting the power of the team to a pulley, shaft, or wheel, whence it may be applied to any machinery, substantially as described.

Also, in combination with an endless belt or band that has a turn or bite around a drum, shaft, pulley, or wheel, a self-acting connecting and disconnecting mechanism, whereby the draught may be continuous though the band or belt is let go and seized by said mechanism for the purpose set forth.

No. 35,064.—STUART PERRY, of Newport, N. Y., assignor to C. H. A. CARTER, of New York, N. Y.—*Improvement in Speed-Regulators for Horse-powers, &c.*—Patent dated April 22, 1862.—Within two arms of the wheel, diametrically opposite to each other, are placed weights provided with springs at each extremity, which act as cushions to prevent too much motion or jar in stopping or starting the machine. The outer spring is also arranged to act as a regulator to the weight. The lower part of each weight is provided with projections which, when the weights are forced out by the centrifugal action, bear with sufficient force on the rim of the loose wheel E to cause it to rotate so as to communicate motion by means of a band to the pulley F. On the axle of this pulley is a cylinder, in which is a small segment cut away so as to act as a brake, the flat part being brought against the rim of the large wheel when the pulley is rotated by the action of the team. The poise acts to remove the brake from the wheel whenever the force is not sufficient to rotate the shaft and raise the weight. By this arrangement of devices a uniform and constant rate of motion is maintained.

Claim.—First, in connexion with a speed-regulator for machinery, the arranging of the weights that are to be centrifugally acted upon, in the hollow arms of the wheel A, in connexion with restraining or regulating springs, substantially as and for the purpose set forth.

Second, in combination with the weights acted upon centrifugally by the wheel A, the loose wheel E, belt *g*, and pulley F, or their equivalents, constructed, arranged, and operating substantially as described.

Third, in combination with a brake which is operated by means of weights acted upon centrifugally, the poise J, applied on the retrograde side of the pulley F, substantially as and for the purpose described.

No. 35,065.—JOHN SCHATT, of Philadelphia, Pa., assignor to S. P. MERVINE, of the same place.—*Improvement in Dry Gas-meters.*—Patent dated April 22, 1862.—Attached to the single central arm of the knuckle D is a pin which moves in slots in the arms, and thereby causes the motion of the diaphragm to be communicated to the valve-stem, one of the slotted levers being attached thereto, the other being fastened to the stationary holder.

Claim.—The employment, in dry gas-meters, of levers C C′ provided each with a slot *e* in its one end, for the reception of a traversing pin *f*, the same operating together substantially in the manner set forth and for the purpose specified.

Also, making the knuckle D to have only a single central arm *d*3, as set forth, and connecting it with the valve-rod levers, provided with suitable slots in their connecting end, substantially in the manner described and set forth, for the purpose specified.

No. 35,066.—JAMES SHERIDAN, of St. Louis, Mo.—*Improvement in Snow-Ploughs.*—Patent dated April 22, 1862.—To the under side of the car body are placed brackets provided with grooves, in which a pin attached to the plough-beam works up and down, thus keeping the plough-beam from interfering with the vertical motion of the car on its springs. Attached to the plough-beam is a double spring, which is carried around a pivot on the bracket and made to bear on the under side of the car-block; this spring holds the plough, which is set obliquely to the truck, in the proper position, but at the same time allows it to yield to any obstructions on the track. A pin on the plough-beam can be made to bear against the spring when it is desired to hold the plough down firmly. The plough, or scraper, is braced by lateral braces extending from a clamp fitting loosely on the beam to a hinge-joint on each of the brackets.

Claim.—The combination, arrangement, and mode of supporting the plough-beam F, with the groove E′, plough and car body, as and for the purpose set forth.

No. 35,067.—ETHAN ALLEN, of Worcester, Mass.—*Improvement in Revolving Fire-arms.*—Patent dated April 29, 1862.—One end of the lever H is hung to the frame, the other end being attached, by means of a projecting arm near its extremity, to the cock. Pivoted to the

inner extremity of the lever, and nearly at right angles to it, is a hooked piece which, when the cock is raised, is made to come in contact with notches in the cylinder so as to revolve it. The size of the notch in the cock is regulated by the screw, thus enabling the piece to be discharged by a slight pull on the trigger, if desired. By means of a rack and pinion, provided with a crank, the centre pin, when it is desired to remove the cylinder, can be carried back into the block.

Claim.—First, the combination of parts *m*, *k*, and H of lever H, being hung at the cock, substantially as specified and for the purpose set forth.

Second, inserting screw *p* in cock F in such a manner that the size of the notch can be regulated from the outside of the arm by turning said screw, as described.

Third, the rack K and pinion M for operating the centre pin, substantially as specified.

No. 35,068.—JOHN F. ALLEN, of New York, N. Y.—*Improvement in Steam Engines.*—Patent dated April 29, 1862.—The object of this invention is to increase the area of the passage for the egress of steam, which is opened or closed by a slight movement of the valve.

Claim.—A cup slide valve, having formed in it a passage which is independent of the exhaust cup, and which opens on the face of the valve in front of and behind the said exhaust cup, in combination with an elevated seat, or one of equivalent form, when the said valve and seat are so arranged relatively to each other that at proper times two passages are opened for the entry of steam into either end of the cylinder, substantially in the manner and for the purposes set forth.

No. 35,069.—JOHN F. ALLEN, of New York, N. Y.—*Improvement in Slide Valves of Steam Engines.*—Patent dated April 29, 1862.—The form of the valves and seat will be evident from the engraving. By this construction a slight movement of the valve is made to open or close a large area of the steam passage, thus preventing a gradual admission of steam into the cylinder or exhaustion from it.

Claim.—The employment of a slide valve, formed as specified, in combination with the described seat, when so arranged relatively to each other that an opening, equal in breadth to twice the distance traversed in the same time by the valve, may be made into one end of the steam cylinder, in the manner and for the purpose aforesaid.

No. 35,070.—JOHN F. ALLEN, of New York, N. Y.—*Improved Link Motion of Steam Engines.*—Patent dated April 29, 1862.—This invention consists in the combination of a Stephenson's link motion, or an equivalent therefor, with one or more steam or induction valves and one or more exhaust valves. The said steam valves, having different movements from the said exhaust valves, when the exhaust valves receive motion from that part of the rocking lever which is best suited to give them correct action, while the steam valves are moved to any other part of the same link, which will cause them to effect a shorter cut-off than that part of the link would do, by which the exhaust valves are moved.

Claim.—The combination of a single link motion, or its equivalent, as specified, with one or more steam valves and one or more exhaust valves; the steam valves having movements independent of and differing from those of the exhaust valves, when all the said valves receive their respective movements from the single link motion aforesaid, substantially in the manner set forth and for the purpose specified.

No. 35,071.—JOHN F. ALLEN, of New York, N. Y.—*Improved Valve Gear for Steam Engines.*—Patent dated April 29, 1862.—The object of this invention is to furnish a substitute for Stephenson's link motion, which will produce in the valves, with which it is connected, movements similar to those derived from said link motion, and while, at the same time, it is designed to possess greater simplicity, and, by reason of its compactness, be more easy of application.

Claim.—The combination of the valve-driving lever *a* and a single eccentric, or of their respective equivalents, when, substantially in the manner described, the said lever receives from the single eccentric movements which are similar to the movements of the link in the Stephenson's link motion, adapting the device as a substitute for the link motion aforesaid, as set forth.

No. 35,072.—S. A. BAILEY, of New London, Conn.—*Improved Wringing Machine Cylinder.*—Patent dated April 29, 1862.—Near one end of the shaft is a circular metallic plate, and near the other a cog-wheel. The rods pass through the plate and cog-wheel, and are secured at one end; they are encircled by the rubber cylinder, into which they are imbedded, and are thus prevented from turning.

Claim.—The employment of the rods *a a a a*, in combination with the shaft A and rubber cylinder B, for the purpose of securing the rubber and preventing it from turning during the operation of wringing, as is fully set forth.

No. 35,073.—L. W. BEECHER, of New Haven, Conn.—*Improved Fruit Basket.*—Patent dated April 29, 1862.—The claim explains the nature of this invention.

Claim.—Using paper for baskets, instead of wood, or other material, fastening the same together with glue or other like matter, and coating the whole with varnish or other preparation that will withstand moisture, substantially as and for the purpose specified.

No. 35,074.—PARDON BOYDEN, of Sandy Creek, N. Y.—*Improvement in Snow Ploughs for Railroads.*—Patent dated April 29, 1862.—This snow plough consists of an inclined bed or platform composed of two parts, each part having a different inclination, the sides and rear portion being protected by peculiarly constructed pieces of metal, in the bottom of which traverse two endless elevators, which, as the snow is forced upon the front of the machine, carry it up and discharge it through exit passages on each side of the plough, clear of the machine and the railroad track.

Claim.—The construction of the frame or body of the plough, as set forth, in which traverse two endless removers or elevators, which effectually deposit the snow clear of the machine and the railroad.

No. 35,075.—ALBERT BROWN, of Mifflinville, Pa.—*Improvement in Flour-Packing Machines.*—Patent dated April 29, 1862.—The claim and engraving explain the nature of this invention.

Claim.—First, the method of imparting rotary motion to the propeller or other rotary flour-packing device so as to allow of its rotation at variable elevations by passing the propeller shaft through the sleeve of the main gear wheel, said sleeve being provided with friction rollers impinging upon and working within grooves or ways arranged along the said shaft, substantially in the manner set forth.

Second, in combination with a stationary hopper or spout for the conveyance of the flour to the bag to be packed, the adjustable funnel constructed and arranged substantially as described, so as to be readily adjustable to the stationary hopper, and securely hold the opening of the bag distended, substantially as shown and described.

Third, the arrangement described of one double-winged screw propeller over the other, so that while the one shall evenly spread the flour in advance of the other, the latter shall press the flour thus spread.

No. 35,076.—F. A. BROWN, of Ithaca, N. Y.—*Improvement in Railroad Chairs.*—Patent dated April 29, 1862.—The chair is swaged from a plate of requisite thickness so as to form a lip or flanch on each side to receive the base of the rail. The bottom of the chair is slotted longitudinally at each side, and the metal between the slots is forced or pressed down to form a box for the reception of a key or wedge, which is driven in and draws down the base of the rails, which operation tends to force apart the upper ends of the rail, and, at the same time, draws the lips snugly to the base of the rail.

Claim.—The employment of the central box C, in combination with the chair A and supporting wedge D, as and for the purpose shown and described.

No. 35,077.—JAMES BUDD, of Sandy Hill, N. Y.—*Improvement in Pumps.*—Patent dated April 29, 1862.—The valve S is provided with a stem which passes up through a stuffing-box on the top of the chamber G′, and also with a screw, by which it can be raised so as to close the induction pipe or lowered so as to close the eduction pipe by pressure on its valve. The valve is placed in a position midway between the pipes when it is desired to draw water through both pipes. The eduction pipes are also provided with valves capable of adjustment, so that either can be closed or both left open at pleasure.

Claim.—First, the two induction pipes F′ Q, in combination with the chamber G′, provided with the valves G S, and all arranged substantially as and for the purpose set forth.

Second, the combination and arrangement of the two nozzles M M′, chamber L, and valve N, and eduction pipe K, substantially as and for the purpose set forth.

No. 35,078.—E. F. BURROWS, of Mystic River, Conn.—*Improved Self-acting Brake for Railroads.*—Patent dated April 29, 1862.—The rods are allowed a longitudinal play in opposite directions in bearings situated under the car body, and, by means of toggle joints attached to their opposite inner extremities, are made to force the shoes, which latter have their upper ends pivoted to the car body, against the wheels. The draught pole is attached to the outer end of the rod, and thus, when the car is descending a grade and the horses hold back, the brakes are applied through the medium of the toggles. The sleeve behind the front bearing prevents the rods from being pulled too far forward. The rod passes through a sleeve in the front part of the car and in reach of the foot of the driver, and can be pressed down so as to come in contact with the front sleeve, and thus prevent the brakes from acting when the car is backed. The levers attached to the ends of the rod enable the driver to operate the brake at will.

Claim.—The combination of the toggles E E F F, shoes G, and rods D, provided with the collars or stops I, all being arranged and applied to the car or other vehicle, substantially as and for the purpose set forth.

Also, the projections J attached to the rods D, in combination with the pins L, for the purpose specified.

Further, the levers M, when used in connexion with the rods D D, and provided with the projections J, the toggles E E F F, and shoes G, all combined and arranged as and for the purpose set forth.

No. 35,079.—LYSANDER BUTTON and ROBERT BLAKE, of Waterford, N. Y.—*Improvement in Pumps.*—Patent dated April 29, 1862.—Each end of the double crank is connected with one of the piston rods respectively, so that one piston is caused to ascend while the other descends, thus producing a simple double-acting pump.

Claim.—The two pistons operating in one cylinder by means of the two piston rods, one passing through the other, combined with and operated by the double crank, in the manner and for the purpose set forth.

No. 35,080.—GARDNER CHILSON, of Boston, Mass.—*Improvement in Dampers.*—Patent dated April 29, 1862.—The lower part of the smoke-pipe, which is made like the frustrum of a cone, is provided with openings which correspond to the annular valve around that portion of the pipe. The handle by which the damper is turned is provided with a slot in which moves a pin attached to the register, and thus the size of the openings are regulated proportionately to the movements of the damper. A small hole is made in the centre of the damper, which allows sufficient draught to maintain a combustion when said damper is closed, and a short cylinder within the main pipe and extending up above the holes in the register acts as a guard to prevent a current of cold air from passing inward through the damper hole.

Claim.—The arrangement and combination, substantially in the manner as described, of a perforated annular air valve G, and its seat B, with a damper D and a smoke-pipe A, containing such damper.

Also, the combination and arrangement of an annular current guard C with a perforated damper and an air register arranged with respect to a pipe or smoke-conductor, and so as to operate substantially as specified.

No. 35,081.—ORLANDO CLARKE and ISAAC UTTER, of Rockford, Ill.—*Improved Evaporator for Saccharine Juices.*—Patent dated April 29, 1862.—Two pans are placed over the furnace, side by side, and so arranged that either may in turn be brought directly over the fire and there receive and boil the juice passing into them from another pan situated over the rear part of the furnace. These pans are each mounted on wheels, which run on inclined rails, each pan being provided with a pinion which gears into a rack on each side of the rails. The depressions at the outer ends of the rails receive the outer wheels of the pan and thus give it a sufficient tilt to enable the scum to be removed with ease.

Claim.—Forming depressions *f* in the inclined rails F, as described, for the purpose of tilting the pans and holding them in that position.

Also, the combination of the racks on the rails F with the pinions on the pan E, when operating in the manner described for the purpose set forth.

Also, the combination of the pans E E', the gearing for moving them, and the inclined rails F, with the fireplace B, when the whole are constructed, arranged, and operated substantially in the manner described for the purpose set forth.

No. 35,082.—J. M. COOK, of Taunton, Mass.—*Improved Signal Mechanism for Locomotive Engines.*—Patent dated April 29, 1862.—The steam wheel is mounted above the boiler, and is in form like an overshot wheel, being caused to rotate by a jet of steam under the control of the engineer. The rotation of the shaft of this wheel is communicated by means of suitable gearing to another shaft, upon which are two disks placed side by side, and connected by a pin. Between the disks is a cam-striker, which, whenever the pin comes against it, is revolved and made to strike one end of a lever, the other end being brought in contact with the bell.

Claim.—The described combination for ringing the bell by steam from the boiler, the same consisting in the steam wheel, the lever hammer or striker, and the gravitating tripper, applied by means and so as to operate together, substantially as specified.

No. 35,083.—JAMES M. COOPER, of Pittsburg, Pa.—*Improvement in Railroad Axles.*—Patent dated April 29, 1862.—Each of the wheels is provided with an independent axle, the inner ends of which fit one within the other. The object of the invention is to obtain a secure and durable connexion between these two parts, which will allow each of the wheels to have an independent motion, and at the same time will afford some lateral play to the two parts of the axle, thus facilitating the passage of the cars around a curve, and enabling them to be transferred to tracks of different gauge. A portion of the male axle, near its extremity, is surrounded by a circular groove, in which are placed two semi-cylindrical tubes, which are secured by set screws to the inside of the tubular portion of the female axle. These semi-cylinders are shorter than the groove, so as to allow a slight lateral movement of the male axle. At the rear end of the tubular portion of the female axle is an elastic pad, a loose disk of metal being interposed between this and the flanged extremity of the male axle. The pad allows the axle to yield gradually to lateral pressure, and the disks give smoothness of motion

Claim.—First, the use of a cylinder or longitudinal sections of a cylinder placed in and

nearly filling a space in the male axle, when fastened to the tubular or female axle, for the purpose of connecting together the male and female axles, substantially as described.

Second, the use of a flanged head at the extremity of the male axle, either solid therewith or attached thereto, in combination with the cylinders or section of cylinders, attached to the tubular part of the female axle, for the purposes set forth.

Third, the use of an elastic pad inside the female axle, or between the solid ends of the two semi-axles, for the purpose of allowing the axles to yield slightly to lateral pressure in running curves or tracks of narrow gauge.

Fourth, the use of a loose disk of brass or other metal placed at the extremity of the male axle, whether the elastic pad be used or not, to render the motion of the axles more easy during any lateral pressure thereon.

No. 35,084.—HORACE DANIELS, of Pawtucket, R. I.—*Improvement in Machinery for Dressing Sewing Thread.*—Patent dated April 29, 1862.—The nature of this invention will be understood from the claim and engraving.

Claim.—First, in combination with a revolving brush cylinder, a series of lifting or carrying rolls which turn with said cylinder, but may turn on their own axes independent of the motion of the cylinder, of which they are a part, substantially as described.

Also, the so arranging the brush cylinder, with regard to a hot-air chamber, as that, whilst it shall revolve partially in or through said air chamber, and partially in or through the surrounding air, the regulating slides *o p* may govern or regulate the hot air admitted to both portions, substantially as and for the purpose described.

No. 35,085.—JOSEPH DAVENPORT, of Massillon, Ohio.—*Improvement in Springs for Vehicles.*—Patent dated April 29, 1862.—This invention is explained by the claim and engraving.

Claim.—A vehicle spring made up of pairs of short sections of leaves *a a* arranged around a common centre and radiating therefrom, and clamped between two disks at their inner ends and rivetted or clamped together at their outer ends, all substantially in the manner and for the purpose described.

No. 35,086.—F. DENZLER, of New York, N. Y.—*Improvement in Toy Breech-loading Fire-arm.*—Patent dated April 29, 1862.—Within the breech is inserted a cylindrical breech piece, provided with a nipple for the cap and chamber, for the shot which is discharged by the explosion of the cap alone. The lower part of this breech piece is surrounded by a rim, which bears against a projection on the lower side of the breech, and by which the breech is kept in its place. Upon the rim are notches which, when the breech is partially turned by a suitable handle, allow the projections to pass, and thus permit the removal of the breech piece.

Claim.—The described movable breech piece when said breech piece is held in its place by a bayonet joint, and is removed out of the breech for the purpose of receiving the charge and the percussion cap after each discharge of the gun.

No. 35,087.—J. R. DIKEMAN and J. J. HEWLETT, of Hempstead, N. Y.—*Improvement in Machines for Marking and Furrowing Land.*—Patent dated April 29, 1862.—The revolving reel, placed upon a shaft between the wheels, marks the position of the furrows as the machine is moved along, the diameter of the reel being nearly that of the wheels, and thus, in connexion with the shares placed in front of the reels, mark off check rows in the land. By increasing the number of bars upon the reel, the distance between the rows can be diminished.

Claim.—The combination of a reel or revolving marker with shares or teeth J attached, or applied to a frame mounted on wheels, and arranged to operate substantially as and for the purpose set forth.

No. 35,088.—J. B. EADS, of St. Louis, Mo.—*Improved Turret for War Vessels.*—Patent dated April 29, 1862.—The nature of this invention is explained by the claim and engraving

Claim.—Making the turret, tower, or shield F that protects the wheel, a protection also to the pilot and lookout, one or both, substantially in the manner and for the purpose set forth.

No. 35,089.—ISAAC EDGE, of Jersey City, N. J., and C. C. HYDE, of Stonington, Conn.—*Improved Mode of Firing Night Signals.*—Patent dated April 29, 1862.—The couch of fulminate is placed in a socket in the stem of the signal and rests upon the fuze composition. This fulminate, it is alleged, will not deteriorate by age, cannot slip from its place, and is not liable to spontaneous ignition. Within a socket in the handle is the sliding rod, which passes through and is attached to a piston which fills the tube. A knob projects from the piston which traverses in a longitudinal slot in the handle, and fits into a transverse slot in its bottom. When the knob is removed from the transverse slot, a helical spring, placed under the piston between it and the bottom of the handle, is allowed to expand, the end of the rod being forced against the fulminate. The weaker spring, placed above the piston, removes the rod at the impact so as to allow the escape of gases.

Claim.—The described improvement in firing night signals by means of the fulminate couch *a*, fired by the self-acting rod *c*, actuated by springs *f* and *g*, and the piston *d* and the

annular plate *h*, through the agency of the button *e*, the slot *i* and the socket *b*, substantially as described.

No. 35,090.—JONAS FARNSWORTH, of Lewiston, Me.—*Improved Window Washer.*—Patent dated April 29, 1862.—This invention consists in the employment of a cylinder provided at one end with a sponge and rubber. Within the cylinder works a piston, by means of which water is thrown upon the window.

Claim.—The combination and arrangement of the piston A, the cylinder B, the head D, with sponge E and rubber F, substantially as and for the purpose specified.

No. 35,091.—HENRY FLETCHER, of London, England.—*Improvement in Crinoline Clips.*—Patent dated April 29, 1862.—The suspenders of the crinoline are passed through slots in the metal clips by which the latter are kept in place. The expanders are then laid across them and firmly secured by bending down the projecting ears.

Claim.—A crinoline clip with slots or holes therein for passing the suspenders through and connecting the expanders thereto, substantially as described.

No. 35,092.—E. H. FUNK, of Newark, Ohio.—*Improved Evaporator for Saccharine Juices.*—Patent dated April 29, 1862.—The larger pan, which is placed immediately over the fire chamber, receives the crude juice which is there exposed to the first process of evaporation. During the boiling the impurities rise to the surface, and by means of a scraper, so adjusted as to extend just below the surface of the juice, are drawn towards the forward end of the pan, the juice passing off through openings into a trough placed for its reception. The condensed juice thence passes into the other pans, which are so arranged on ways that while the juice in one pan is being condensed, the sirup in the other is removed from the fire and allowed to settle and clarify. If the formation of sugar is desired, the juice is drawn in the pan K and there allowed to granulate.

Claim.—The construction and arrangement of the pans or kettles G J J, with relation to the furnace and to each other, for the purpose of evaporating and clarifying and converting into molasses the juice of sorghum, as described and represented, whether the pan K be used in connexion with them or not, as set forth.

No. 35,093.—LUCIAN GABEL, of Richmond, Ind.—*Improvement in Combined Sword and Pistol.*—Patent dated April 29, 1862.—The hilt of the sword is divided longitudinally into two sections, which are hinged together and clasped by means of a spring catch. Within the hilt is a pistol, the barrel, hammer, and trigger of which project from the hilt, and which can be used in connexion with the sword, or can be taken out and used separately.

Claim.—The arrangement of a pistol and sword so as to be used jointly or separately, in the manner fully set forth and described.

No. 35,094.—A. J. GOVE, of San Francisco, Cal.—*Improvement in Faucets.*—Patent dated April 29, 1862.—The hollow truncated cones fit within each other and are fastened together by a nut, the outer ends being provided with flanges which bear against each other. Into the outer end of the inner cone is inserted a nozzle, which is held in position by a pin upon its end, which fits a corresponding hole in the end of the cone. The bung is closed or opened by turning the nozzle up or down, and can be kept closed by means of a catch secured to the flange of the inner cone. The object of this is to have those parts of the device which form the faucet permanently secured in the cask (one such faucet to each cask) and allow the use of a portable nozzle, which can be attached to any faucet, and serves both as a key for opening the faucet and as a nozzle for discharging the liquid.

Claim.—The combination of the hollow-truncated cones A and B and nozzle D, the whole being constructed, arranged, and operated in the manner substantially as specified, and for the purpose set forth.

No. 35,095.—J. S. HALL, of Pittsburg, Pa.—*Improvement in Breech-Loading Ordnance.*—Patent dated April 29, 1862.—The breech of the gun is of cylindrical form, and has in it a vertical conical opening, in which the breech plug is inserted. This breech plug is of conical form, and is mounted upon a neck, under which are handles, by which it may be rotated. Across the plug is made a recess or opening, which can be turned to coincide with the bore of the cannon, and a hole bored through the rear end of the breech. Upon the top of the conical piece are situated two nipples opposite each other, and communicating with the bore of the gun. Portions of the conical plug diametrically opposite each other are so cut away as to form four sharp cutting edges, which keep the breech clear, and also cut off the ends of cartridges placed in the gun. The cut away portion also forms openings through which air circulates, thus keeping the breech plug cool. In order to load the cannon, the plug is rotated until its recess coincides with the bore of the gun; the cartridge is then placed in the recess and rammed home through the hole in the rear portion of the cannon. The plug is then rotated again until two nipples come under the hammer, and the breech is closed.

Claim.—In combination with the conical opening in the breech of a cannon, the vertical conical plug or breech block, operating therein, substantially as described.

Also, in combination with the conical breech and plug or block, the hole *m* in the former, and the opening *b* in the latter, for inserting and ramming home the cartridge, substantially as described.

No. 35,096.—S. T. HOLLY, of Rockford, Ill.—*Improvement in Harvesters.*—Patent dated April 29, 1862.—A proper movement is given to the rake carriage by means of a quadrilateral rack mounted on a frame, and operated by a pinion connected to the shaft of the main driving wheel, and attached to the rake carriage by a pair of cross-bars connected at their intersections, one end being pivoted to the rack frame, the other end being attached to a roller traversing in a slot in the rack carriage. The other lever is pivoted to the rack carriage, and is fastened to a roller traversing a slot in the rack frame. This arrangement causes the rack, in moving up and down, to maintain its parallelism. To the crank is fitted a spring bolt, which slides longitudinally in it, and is made to engage in a circular nosing secured to the machine concentrically with the pinion shaft. The spring bolt is provided with a handle parallel with the crank handle, so that the operator, at the same time and with the same hand that he grasps the crank handle to raise or lower the machine, withdraws the spring bolt from the notches in the nosing in the handle in which it was engaged.

Claim.—The arrangement of the guides of the rake carriage at an acute angle with the line of progression of the machine, so as to carry the rake further from the divider side of the machine, as it is moved backward on the guides, substantially as set forth.

Also, the combination of inclined guides for the rake carriage substantially as set forth, with mechanism for moving the rake teeth forward in a line parallel or thereabouts with the line of progression of the machine, substantially as set forth.

Also, the combination of quadrilateral rack of a rake mechanism with the frame in which it moves, by means of a pair of crossed levers, substantially as set forth.

Also, the combination of a crank handle for operating the pinion of the raising and lowering mechanism of the cutter bar with a spring bolt and circular nosing, substantially as set forth.

No. 35,097.—ALFRED INGALLS, of Independence, Iowa.—*Improvement in Machines for Upsetting Tires.*—Patent dated April 29, 1862.—The tire to be upset is placed upon the upper side of the stock, where it is firmly held by jaws which are actuated by means of cams, so as to enable them to be adjusted to any thickness of tire. The bearing plate rests on the upper surface of the stock, and is provided with pendant links, through which the key can be driven, and thus the plate adjusted to ties of different diameters.

Claim.—First, the cams *f f*, in combination with the jaws D D, attached to the bars A A', and arranged, in relation with the jaws, to operate as and for the purpose specified.

Second, the key H, when used in connexion with the bars A A', jaws D D, cams *f f*, stock C, and cam F, as and for the purpose set forth.

No. 35,098.—ROSS JOHNSON, of Frederick, Md.—*Improvement in Ploughs.*—Patent dated April 29, 1862.—The mould-board is cast with oblong openings in its face, in which are inserted friction rollers, which, by preventing the impact of the rod against the face of the mould-board, lighten the draught of the plough, and also cause a proper "lay" of the furrow slice. The upper one of the friction rollers is of larger diameter than the others, and is called "the turning roller," because it completes the reversal of the rod as it leaves the plough. The plough point F is constructed with a broad face, having in it a recess in which, between a portion of the plough point and the outward edge of the mould-board, is secured a rotary cutter. By this arrangement the cutter is situated at the nearest practicable point of the draught, and also has secure bearing for working. The steady roller is secured between the mould-board and land side at their lower rear extremities, its axis having a bearing in both these parts. This roller affords a bearing to the plough in the track of the furrow, and thus gives steadiness of action. It also, owing to the peculiar construction of its working face, cuts channels in the bottom of the furrow, which serve as drains for surplus water.

Claim.—First, a solid or unbroken faced mould-board, having a friction roller *e*, or rollers *e* and *e'*, of continuous unbroken working face, and so secured centrally and longitudinally in the working face of the mould-board that said roller or rollers shall present a flush bearing to the furrow slice as it rises upon, passes over, and falls away from the mould-board, in the manner and for the purpose specified.

Second, the auxiliary turning roller *e''*, in combination with the friction rollers *e* and *e'*, and mould-board *b*, in the manner and for the purpose set forth.

Third, the rotary cutter A, in combination with the plough point F, extension *g* thereof, and mould-board *b*, in the manner and for the purpose specified.

Fourth, the steady roller G, in combination with the land side *a*, mould-board *b*, plough point F, and cutter A, in the manner and for the purpose set forth.

No. 35,099.—G. W. LEMLEY, of Pavilion, N. Y.—*Improvement in Machines for Boring Seats of Buggies.*—Patent dated April 29, 1862.—This machine consists of a block which is clamped to the carriage seat, and is provided with a cornerer capable of adjustment by means of slots and thumb-screws, by which it can be fixed to the seat in the proper position, so as

to bring the inclined tube passing through the block over the place where it is desired to bore the corner hole. By means of the screws H H passing through the block, it can be inclined to the seat so as to produce a corresponding inclination in the corner hole. Slotted standards on the face of the block support the gauges, one of which is attached to the guide S, having feet which rest upon the seat, and by which the block, when removed from the seat, can be replaced in the same position as before. Upon the front edge of the block are inclined planes, one being the reverse of the other. The operator, placing the stock of his bevel on the upper edge of the gauges in turn, and adjusting the blade to the inclined planes respectively, is enabled by the first operation to determine the bevel of the post for the hole in its cross section by the section of the bevel of the shoulders at the tenons on the top and bottom of the posts.

Claim.—A machine for boring the corner holes in buggy seats, and articles of a like nature, consisting of a combination of proper means for regulating and determining the point where and the angle at which the said holes are to be bored, substantially as described.

Also, a machine which possesses the capacity of regulating and determining the place and angle of the corner holes, as well as proper means for determining the bevel of the posts in their cross section for that angle, substantially as set forth.

Also, a machine which possesses the capacity of regulating and determining the place and angle of the corner holes, as well as proper means for determining the bevel or mitre of the shoulders of the tenons on the posts for that angle, as described.

Also, a machine comprising proper means for laying out or determining all the bevels of the posts of carriage seats, &c., to fit them to any desired angle of corner or post hole, as set forth.

And, finally, a machine consisting of a combination of proper means to bore the corner or post holes of a carriage seat, &c., at any desired angle, and to determine or indicate the bevel of the posts in their cross section, and the bevel or mitre of the shoulders of the tenons thereon, for that particular angle or corner or post hole, as specified.

No. 35,100.—R. O. LOWREY, of Saratoga Springs, N. Y.—*Improvement in Windmills.*—Patent dated April 29, 1862.—The radial arms attached to the upper extremity of the shaft are provided at each end with a short arm, forming a right angle, each end having the angle the reverse of the other. The extremity of each of these arms is provided with ears, which correspond to ears placed near one end of the side pieces of the brackets on the wings, and through these ears passes an axle pin to form a connexion between the wings and arms. Upon each arm, near the wing, is a lever having at one extremity a friction wheel, which bears against one side of the cross-piece of the bracket; to this lever is connected a cord, which is attached to a sliding-ring weight on the lower part of the main shaft. In this manner, when the force of the wind becomes so great as to drive the ways on the friction rollers, the weight acts as a governor, the said weight being provided with a lever by which it can be raised or depressed. When it is desired to stop the mill the weight is raised, which allows the ways to feather in a line with its wind current.

Claim.—First, the arms H, with termini of the construction described, in combination with the hinging brackets J of the wings or blades I, substantially as set forth.

Second, in combination with the arms H and brackets J, the levers K, rollers *k*, stops *i*, cords L, and ring weight C, substantially in the manner and for the purpose described.

Third, the arrangement of a sliding-ring weight, constructed as described, in combination with the vertical shaft A, blades I, and clutch lever D, substantially as and for the purposes set forth.

No. 35,101.—J. LUCCOCK and J. M. L. GOWDY, of Peoria, Ill.—*Improvement in Churns.*—Patent dated April 29, 1862.—This invention consists in the combination of a rotatory dasher, consisting of a series of curved beaters of varying lengths, with a series of racks or breakers arranged within the churn, the dashers occupying such a position, in respect to the racks, that the ends traverse within the racks, while those of the others traverse beyond the racks, thus creating counter currents in opposite directions through the rack, which impinge upon each other, and thus facilitate the rupture of the oil globule.

Claim.—The combination of the rotary dashers C C′ C″ of unequal lengths with the racks or breakers D, when constructed, arranged, and operating as described for the purpose set forth.

No. 35,102.—W. J. LYMAN, of East Hampton, and A. E. LYMAN, of Williamsburg, Mass.—*Improvement in Coffins.*—Patent dated April 29, 1862.—Inside the coffin are placed lateral and vertical braces, which are used in connexion with knees at the angles to strengthen the coffin. The joints are rendered tight by filling grooved recesses which are formed over them with cement, and each side of the cover is provided with a tongue which fits into a corresponding recess, which is also filled with cement. The outer surface of the coffin is covered with successive coats of a cement of shellac and India-rubber, alternating with coatings of sand, emery, or like material. By this method of construction a coffin is obtained which, it is claimed, is strong and air-tight and durable.

Claim.—The improved coffin, substantially as described, as a new article of manufacture.

No. 35,103.—WILLIAM MANSFIELD, JEDEDIAH MORSE, and H. H. MANSFIELD, of Canton, Mass.—*Improvement in Projectiles for Ordnance, &c.*—Patent dated April 29, 1862.—This invention consists in providing in the rear of the projectile two or more spiral air passages formed between two cones, and communicating with a central passage in the front part of the projectile, for the purpose of imparting a rotary motion about its axis by the action of the atmosphere upon it when discharged from a smooth-bore gun. The rear portion of the exterior of the gun is made of a conical form externally, as well as internally, the exterior of such conical portion being in rear of a shoulder over which, in the flight of the projectile, the air rushes against the said surface on all sides thereof, for the purpose of insuring the projectile striking on its point.

Claim.—First, the spiral air passages *c c*, formed between two cones B *b*, and combining with a central air passage *a*, substantially as and for the purpose specified.

Second, the combination of the external conical surface *f*, forming the exterior of a hollow cone, and the shoulder *g*, substantially as and for the purpose specified.

No. 35,104.—ENOCH OSGOOD, of Boston, Mass.—*Improved Regulating Valve for Air, Gas, &c.*—Patent dated April 29, 1862.—The nature of this invention consists in the application and combination of a valve and a diaphragm, a little larger than the valve, arranged and connected together to operate against each other to hold and balance any pressure that may come against them, the gas coming in between them and out through the valve into the chamber below it for use.

Claim.—The combination of a valve and a diaphragm enough larger than the valve to give it any desired power over it wanted to close it, to hold and balance any pressure that may come in between them to be weighed out by weights on the diaphragm, to give the desired pressure wanted in the chamber below the valve for use, constructed and connected together to operate against each other substantially as and for the purpose described.

No. 35,105.—GORDON MCKAY, of Boston, Mass.—*Improvement in Boots and Shoes.*—Patent dated April 29, 1862.—This invention is designed as an improvement upon the invention for which patents were granted to L. R. Blake on August 14, 1860, and it consists in quilting the sole with a seam or seams formed of a succession of stitches, known as the chain or tambour stitch, each of which passes through the different layers of which the sole is composed and uniting them together.

Claim.—The formation of a quilting seam or seams within those used for holding the vamp, said quilting being formed of chain or tambour stitches passing through the whole thickness of the sole, substantially as and for the purposes set forth.

No. 35,106.—S. H. NOBLE, of Vernon Springs, Iowa.—*Improvement in Sled and Sleigh Runners.*—Patent dated April 29, 1862.—This invention consists in constructing a sled or sleigh runner of cast metal or wood, combined in such a manner that a straight piece of wood may be used for the main portion of the runner, and cast metal for the crook and for the shoe of the wooden portion; the object being to avoid the natural crook of ordinary wooden runners, and thereby obtain a more durable as well as more economical runner than those constructed in the usual manner.

Claim.—As a new article of manufacture, a sled or sleigh runner formed of a cast-iron crook B, with or without the shoe C, and a straight wooden portion A, combined or put together, substantially as shown and described.

No. 35,107.—J. P. MARSHAL, of Millbury, Mass.—*Improvement in Breech-loading Fire-arms.*—Patent dated April 29, 1862.—The gun is loaded in the following manner: The ring of the operating lever being raised, the lock bolt is depressed, when the movable breech is drawn back by the ring of the lever, leaving an opening in the top of the breech sufficient for the insertion of a cartridge. While the breech is open the trigger is prevented from acting on the side of the bolt, which rests upon its rearward arm and holds it down. After the cartridge is introduced, the movable breech is shoved forward, and closes the opening in the stationary breech, when, by the pressure of the operating lever on the bolt M, the lock bolt is forced into a recess in the cylinder, and the movable breech is securely locked in its forward position.

Claim.—First, the combination of the peculiarly constructed stationary breech C, with the movable breech D E, arranged for conjoint operation in the manner and for the purpose specified.

Second, the combination of the operating lever H and movable breech with the lock bolt J and trigger P, substantially as and for the purpose described.

Third, the combination of the breech pin X, constructed as described, with the screw G, plate E, and cylinder D, arranged and operating as and for the purpose set forth.

Fourth, forming the cone seat and its shield of the same piece with the lock plate, in the manner and for the purpose set forth.

Fifth, forming a circular flange around the vent of the stationary breech piece to fit into a cavity or recess of corresponding size in the rear side of the cone shield, in the manner and for the purpose described.

No. 35,108.—H. H. PALMER, of Rockford, Ill.—*Improvement in Pumps.*—Patent dated April 29, 1862.—Upon the floor or platform of the well is firmly bolted a standard provided with a flange or rib which acts as a guide for the air chamber. Through the platform extends downwards a hollow tube or piston rod F to a hollow piston G. The water chamber H is sustained by means of a bent rod or strap attached at its upper ends to a ring or collar suspended below the platform by means of screw rods and adjusting nuts. The pump is designed more particularly for drilled or bored wells, which are usually of great depth but small diameter,

Claim.—The combination of the water chamber H with the suspension rod K, when arranged and operating as described for the purpose set forth.

Also, suspending the water chamber from the platform A by means of the rods J and K and guide ring I, as and for the purpose described.

Also, the combination of the flanged standard B, air vessel C, piston tube F, piston G and water chamber H, when the whole are arranged for joint operation, substantially in the manner described.

No. 35,109.—JOHN PERRY, of Albany, N. Y.—*Improvement in Machinery for Ginning Cotton.*—Patent dated April 29, 1862.—Upon the upper rail of the frame of the machine is a stationary shaft bent in a crank form, upon which is fitted a revolving hollow cylinder, having slots cut in its periphery for the passage of teeth which are attached to rods. These rods are arranged with journals at their ends fitted to turn or oscillate slightly within bearings within disks, which are fitted to revolve within the outer cylinder upon the crank shaft. The teeth being thus caused to vibrate through the slots in the cylinder, enter the cotton with a gradual motion forwards as well as downwards, so as to form the lint without tearing or injuring the fibre, and by being gradually withdrawn from the slots they are freed from the cotton lint, thus avoiding the necessity of using a brush wheel.

Claim.—The construction of a picker for a cotton gin consisting of a hollow revolving cylinder D, having through its outer periphery slots or openings for the passage through them of teeth *j j* affixed to rods which oscillate in bearings placed near the outer periphery of a pair of disks E located within the cylinder, these disks being arranged to revolve simultaneously with the cylinder D on an axis eccentric to its axis, so as to cause the said teeth to vibrate back and forth through the slots, substantially in the manner and for the purpose set forth.

No. 35,110.—H. C. PIERCE, of Homer, N. Y.—*Improvement in Churns.*—Patent dated April 29, 1862.—This invention consists in the arrangement of certain parts in combination with the rubbing disk and revolving dasher, whereby either may be made to revolve or both together at will by the same driving wheel; and the said driving wheel may be readily changed from one position to the other. In combination with the rubbing or mixing disk are wings or fans for drawing in atmospheric air and causing it to mingle with the cream as it leaves the said rubbing disk. In combination with the said wings or fans and rubbing disk are adjustable openings for the admission of air thereto in greater or less quantities as may be desired, in order to adapt the operation to variations in the temperature of the air.

Claim.—First, the arrangement of the eccentric lever L, spring catch M, and ratchet plate N, in combination with the wheel K, pinions C and F, disk D, and dasher shaft B, substantially as and for the purpose described.

Second, the employment of the wings G in combination with the disk D and holes H H, substantially as and for the purpose set forth.

Third, the employment of the plate I, or its equivalent, in combination with the disk D, wings G, and holes H, for the purpose of controlling the admission of air to the interior of the churn, substantially as set forth.

No. 35,111.—L. B. PRINDLE, of Litchfield, Conn.—*Improvement in Cups for Elevators of Flouring Mills.*—Patent dated April 29, 1862.—This invention consists in making cups of malleable cast iron, with guards cast on the front to protect the cups and diminish the friction while running, the cups being attached to an endless belt for elevating grain, meal, and flour in mills and storehouses.

Claim.—As a new article of manufacture and sale, making elevating cups of malleable cast iron, for the purposes set forth.

No. 35,112.—GELSTON SANFORD, of New York, N. Y.—*Improvement in Head-rest for Car Seats.*—Patent dated April 29, 1862.—The frame of the head-rest consists of two upright wooden rods connected near their tops and bottoms by strips, kept apart by a hinged crosspiece and prevented from swaying sideways by adjustable braces. The device is secured to the back part of the car seat by means of two hooks passing over it, each being provided with an eye through which the rods pass.

Claim.—An adjustable portable rest for the head to be attached to the back of a car seat, and so arranged that it can be folded together so as to occupy less space when not in use, substantially as specified.

No. 35,113.—ISAAC SHERWOOD, of Unadilla, N. Y.—*Improvement in Water Elevators.*—Patent dated April 29, 1862.—Each shaft of the spools or drums upon which the bucket cords are wound, is provided at its inner end with a cog-wheel, which wheels gear into each other and are caused to rotate by the action of a cog-wheel on the end of a shaft arranged above the same, and provided with a crank and handle. This latter shaft has a lateral movement in its bearings, so that the wheel can be made to gear with either wheel or else brought in contact with both, and thus stop their motion. A lever G pivoted to the frame has attached to it an elbow joint provided with a clutch, which embraces the wheel E, and in this manner, when either of the buckets is brought to the termination of its upward movement, it strikes the lever, and thus gives the wheel E a lateral movement which causes the movement of both shafts to be arrested, and allows one bucket to be filled while the other is being emptied.

Claim.—First, a water elevator having, in combination, the wheels D and D2 and E, constructed and operating substantially as described.

Second, in combination therewith, the double-acting lever G and G2 H K K2, constructed and operating substantially as described.

No. 35,114.—ISAAC STEAD, of Philadelphia, Pa.—*Improvement in Condensing Carding Engines.*—Patent dated April 29, 1862.—The face of the doffer is covered with a continuous piece of wire fillet and divided into a certain number of parts. In order to separate the fibres at the points where the wire is divided, use is made of a small revolving toothed separator formed of circular plates separated by collars adapted to the width of the rings or divisions on the doffer, the plates or saws passing between the rings on the doffer. In connexion with the separator is used a stripper consisting of a plain roller covered with wire fillet, and set so as to work between the fibre separator and cylinder, and serves to carry back the fibres taken from the doffer to the cylinder.

Claim.—First, the revolving toothed cylinder I, in combination with the doffing cylinder B, of a condensing carding engine, as forming a fibre separator, as described.

Second, the stripper S, in combination with the revolving toothed cylinder I, for the purpose of removing the fibres which may collect on the teeth, and carrying them back to the main cylinder, as described in specification.

No. 35,115.—E. M. STEVENS, of Boston, Mass.—*Improved Clothes Wringer.*—Patent dated April 29, 1862.—The lower part of the jointed levers bears upon the ends of the axle of the upper roller, and in order that the pressure may be regulated to clothes of different thicknesses, the two parts of the lever are connected by a mortise and tenon. By means of thumb-screws, the tension of the spring, connecting the upper parts of the jointed lever, can be regulated. The cores of the roller are fluted so as to enable the rubber to be held securely thereto, while the spaces between the cylinders give to the rubber additional elasticity. The lever clamps are provided with self-adjusting feet to enable the machine to fit the sides of any tub.

Claim.—First, the jointed levers F F, provided with thumb-screws *h h*, substantially as set forth and for the objects specified.

Second, making the core W of the rolls fluted, and fitting into the flutes cylinders of rubber *r*, surrounded by a rubber tubing R, substantially as and for the objects specified.

Third, the combination and arrangement of the lever K, self-adjusting foot N, and thumb-screw M, substantially as described and for the objects specified.

No. 35,116.—A. STEWARD, of Plano, Ill.—*Improvement in Stationary Counter Scissors.*—Patent dated April 29, 1862.—The lower blade of the scissors is pivoted at its extremity in a notch under the counter and the lower blade is bent at a right angle, and attached to a rod sliding in guides under the counter, which is connected to a foot lever and treadle. By pressure on the treadle the rod is slid forward and the bent part of the scissors passed beyond and over the edge of the counter and made to operate through a notch in the counter at the extremity of the measure.

Claim.—Stationary scissors, hung and operated substantially as described.

Also, in combination therewith, a measure so arranged that the cutting blades shall operate at one extremity thereof, as described.

No. 35,117.—N. W. TAYLOR and J. W. BRIGHTMAN, of Cleveland, Ohio.—*Improvement in Machines for Drying Sized Paper.*—Patent dated April 29, 1862.—This invention consists of an apparatus by means of which sized or wet paper is first subjected to a moist heated atmosphere and then conveyed gradually into an atmosphere of increased heat and dryness until it passes out of the dryer. Its construction will be understood from the claim and engravings.

Claim.—First, the described construction of a drier, consisting of an enclosed chamber, provided with suitable openings, for the purposes specified, and which can be closed at pleasure, and having within said chamber the bearing rollers placed in horizontal rows, and the successive sets so arranged in relation to each other and the points of introduction for the paper and the heated air, that the paper will pass continually from a moist to a dry and heated atmosphere, as and for the purpose specified.

Second, moving the rollers S M N O P, at decreasing velocities, for the purpose set forth.

Third, the plates R and openings *a' b'*, arranged as and for the purpose described.

No. 35,118.—THOMAS TRIPP, of Amsterdam, N. Y.—*Improved Water Wheel.*—Patent dated April 29, 1862.—To the main or driving shaft of the wheel is secured a conically shaped centre piece to which is attached a series of buckets. The lower edges of these buckets are curved on their inner sides towards the centre of the wheel, and upon their outer bottom edges are smaller or auxiliary buckets constructed of V-shaped form, their inner edges conforming to the curvature of the main buckets to which they are attached, and their outer edges being convex. Around the auxiliary buckets is placed a band or rim which forms the outer side of the said buckets. The buckets are so arranged that as the water strikes against the outer or convex sides of the main buckets, it falls into the auxiliary buckets, the bottoms of which are inclined towards the bottom of the wheel, thus making a point of resistance and serves to give additional motion to the wheel, which is designed as a "percussion" instead of a "reaction" wheel.

Claim.—First, the conic form or shape of the centre of this wheel, as applied to water wheels.

Second, the extension of the lower middle point of the main buckets C C, figure 1, at the point 1, so as to receive the inclined auxiliary buckets, as represented.

Third, the curvature of the inner bottom edges of the main buckets, as represented in figure 1 by the red dotted lines.

Fourth, the curved and V-like shape of the inclined auxiliary buckets to water wheels, as represented by *b b b b*, figure 2.

Fifth, the scallop or concave of the lower edges of the bottom of the inclined auxiliary buckets, as applied to water wheels—the different curves of the parts of the wheel being arcs of the same circle as the circumference of the entire wheel.

Sixth, inclined curved auxiliary buckets, attached to curved or concavo-convex main buckets, conforming to the curvature of said main buckets.

No. 35,119.—GEORGE TURNER, of Cambridge, Ohio.—*Improvement in Corn Shellers.*—Patent dated April 29, 1862.—The shelling cylinder is made tapering with the teeth placed further apart at the large end than at any other part, and closer together towards the smaller end, for the purpose of rendering the operation easy at the commencement. The box is provided with springs against which the ears of corn are pressed by the cylinder, and upon one of which is a tapering block which serves to change the position of the ear, inclining first one end and then the other to the action of the cylinder and teeth.

Claim.—The tapering cylinder D, with teeth further apart on the large end, and closer together as they approach the small end, so arranged and operated that the ear of corn shall first be received at the large end of said cylinder, and pass toward the small end in process of being shelled, in combination with the springs E and F, and inclined plane G, in the manner and for the purposes set forth.

No. 35,120.—AMOS WESTCOTT, of Syracuse, N. Y.—*Improvement in Churns.*—Patent dated April 29, 1862.—This churn is composed of a long rectangular box, through which passes longitudinally a shaft provided with paddles of such a shape, and arranged in such a manner, that when turned in one direction they act as ordinary flat paddles, but when the motion is reversed they tend to cause the particles of butter to collect in the centre of the churn, where the mass is effectually worked over. On one end of the box is placed a fan, by means of which, during the operation of churning, a current of air is forced through the churn.

Claim.—The combination of the plano-diagonal dasher paddles, Fig. 7, A and B, with the box, Fig. 4, and with the shaft A A, Fig. 5, when these paddles are set in such a manner about the shaft, Figs. 5 and 6, as that when the shaft is turned in such direction as to make the diagonal faces of the paddles strike the cream or milk, their effect will be to force the particles of butter, whether large or small, which may be floating in the fluid, toward a vertical plane in the box of the churn parallel to its ends.

Also, the employment of the fan wheel, Figs. 3 and 4, constructed essentially as and for the purposes set forth, in combination with the other parts of the churn, as described.

No. 35,121.—D. H. WHITTEMORE, of Worcester, Mass.—*Improvement in Straw Cutters.*—Patent dated April 29, 1862.—The two cylinders are caused to move at different rates of speed, the knives on one being closer together than those on the other. The bearings of the cylinders are attached to an iron frame, the upper end of which is secured to the top of one of the uprights, while at its lower part it is secured by a set screw, by means of which the bottom of the frame is thrown out, and with it the lower cylinder, so as to regulate the cut of the straw. A board, forming a part of the bottom of the hopper, and hinged to it near the middle, is supported on a block, connected by a spring to the outer supporting standard, which spring can be moved backwards and forwards so that its pressure on the board can be regulated. By means of this adjustable bottom a pressure on the feed is obtained by which it is prevented from being drawn forward too fast or easily when a short cut is desired.

Claim.—First, so arranging two cylinders together that the periphery of one shall move faster than that of the other, and at some point between them the knife or knives upon one shall move past the knife or knives or projections upon the other cylinder in such a manner that both a shear cut and self-feeding operation shall be produced thereby.

Second, arranging two cylinders together in such a manner that their relative position with the feed in the hopper can be changed for the purpose of varying the length of the feed cut, or so placing them upon the frame that the line of centre of the two cylinders will not be at right angles with the bottom of the hopper, as represented in the drawings, for the purpose of producing a short cut, substantially as set forth.

Third, combining with said share-cutting cylinders the movable mouth-piece L, substantially in the manner and for the purpose set forth.

No. 35,122.—J. A. WILLIAMS, of Utica, N. Y.—*Improvement in Locomotive Lamps.*—Patent dated April 29, 1862.—The object of this invention is to obtain a locomotive lamp in which the flame can be supplied with sufficient oxygen to support combustion, while at the same time it is prevented from flickering owing to the motion of the locomotive. The air is supplied externally through the perforations in the encompassing cylinders, and thence passes up through the cap or deflector, and internally through the perforations in the hollow base, passing up through the wick tube. The arrangement of the two other cylinders, and of the cap over the perforations in the base, causes a uniform flow of air by which the flame is kept steady.

Claim.—The perforated cylinders E F, one or more, in combination with the cap or deflector G, and hollow wick tube C, arranged substantially as and for the purpose specified.

Also, the perforated cylinders E F, one or more, cap or deflector G, perforated hollow base K, provided with the perforated cap L, in combination with the hollow cylindrical wick tube C, all arranged for joint operation, substantially as and for the purpose set forth.

No. 35,123.—LORENZO WINSLOW, of Rochester, N. Y.—*Improved Wrench.*—Patent dated April 29, 1862.—Within the jaw B is arranged a pawl, having on its upper edge teeth which fit into teeth on the under side of the shank of the wrench, and thus hold the jaw firmly in position. The pawl can be released, when it is desired to move back the jaw, by means of a pin passing through it and the jaw.

Claim.—The arrangement within the jaw B of the dog *d* and spring S in relation to the notched shank A, the whole operating in the manner and for the purpose substantially as set forth.

No. 35,124.—D. T. YEAKEL, of Lafayette, Ind.—*Improvement in Mode of Constructing Ordnance.*—Patent dated April 29, 1862.—The claim and engraving explain the nature of this invention.

Claim.—The use of plate or sheet iron or steel in the manufacture or construction of large iron or steel cylinders, by winding the plate or sheet iron or steel (the plate or sheet being in width equal to the desired length of the cylinder) around a central mandrel until by repeated continuous layers the intended size is produced, and after the first layer around the central mandrel (which may or may not be welded to the mandrel,) each part of the plate or sheet of iron or steel so wound to be welded to the part immediately under it.

No. 35,125.—D. C. LAWRENCE, of Cedar Falls, Iowa.—*Improvement in Spring Balances.*—Patent dated April 29, 1862.—The suspending hook, scale, handle, spring, and index pointer are all formed from a single piece of wire, which is bent into the form shown in the engraving.

Claim.—A spring balance made of a single piece of wire, substantially in the manner and for the purpose set forth.

No. 35,126.—E. L. PRATT, of Philadelphia, Pa., assignor to J. B. COLLIN, of Boston, Mass.—*Improvement in the Thread Tension of Sewing Machines.*—Patent dated April 29, 1862.—The pressure plates, between which and the bed plate of the main supporting frame of the device, the threads pass, are hinged upon a wire connecting opposite ends of a bail piece, which latter passes through ears on each side of the main frame and extends under it. The bail piece is slotted so as to admit of the longitudinal movement of a screw provided with a check nut to secure it in any position. The screw is provided with a nut, attached to which and passing through the screw is a piston bearing against the bed-plate *a* and encircled by a spring. Compression of the piston tends to compress the threads between the plates and thus regulate its tension, and the longitudinal movement of the screw enables the pressure to be regulated proportionally, the pressure on each thread being inversely to the distance from the point of pressure of the piston. The check nut retains the screw in any position desired, so that the total pressure can be increased or diminished without altering the proportion of pressure on each thread.

Claim.—So combining and arranging the tension devices which operate upon the threads used in a sewing-machine which makes the double chain or Grover & Baker stitch, that a relative or any desired relative proportion of the whole tension upon the threads is made to be automatically operative upon each thread, and so maintained when the total tension on the threads is increased or diminished, said arrangement and combination being such that changes in the amount of the tension may be made with facility, substantially as described.

No. 35,127.—COLEMAN SELLERS, of Philadelphia, Pa., assignor to WILLIAM SELLERS & Co., of the same place.—*Improvement in Wheel Press.*—Patent dated April 29, 1862.—The

adjustable upright is suspended between the tension bars F and G, extending between the permanent uprights, and can be adjusted in any position on them by means of keys and slots, so that it can be used with equal facility both for putting on and taking off wheels, a notch being made in the side of the adjustable upright to receive the axle. The blocking piece is hinged to the end of the plunger so that it can swing out of the way when it is desirable to bring the plain face of the ram against the work.

Claim.—The use of an adjustable upright H, or its equivalent, substantially in the manner and for the purpose specified.

The hinged attachment of the blocking piece N, or its equivalent, to the forcing-up plunger, substantially in the manner and for the purpose specified.

No. 35,128.—THOMAS SHAW, of Philadelphia, Pa., assignor to Himself and PHILIP S. JUSTICE, of the same place.—*Improvement in Laying Telegraphic Cables.*—Patent dated April 29, 1862.—Attached to the cable connected with the vessel is a friction clutch through which the cable passes; this consists of a ring to which are attached three springs supporting the block of metal, which clasp the cable so tight as to create friction, and thus form a support.

This supporting device prevents the weight of the cable from clutching the conducting wire.

Claim.—The partial supporting of the telegraphic cable while paying out by means of an additional cable, when connected with friction clutches, as described.

No. 35,129.—H. D. STOVER, of New York, N. Y., and W. W. W. WOOD, of Philadelphia, Pa., assignor to said H. D. STOVER.—*Improved Shutters for the Portholes of Vessels, &c.*—Patent dated April 29, 1862.—On each side of the porthole of the vessel are hinged plates of metal having plane or concave surfaces, and provided with recesses in their edges which fit over the barrel of the gun, but of such a size as not to allow the plates to close perfectly, thus leaving a vertical gap through which the gunner can take aim. These shields, when closed, converge at such an angle as to cause projectiles striking them to glance. They are operated by means of springs, so as to act automatically, or by levers and weight. The openings at the top and bottom between the shields are closed by semi-pyramidical blocks secured to the sides of the vessel. These shields are designed to prevent projectiles entering the portholes of vessels otherwise protected by armor.

Claim.—First, the construction and arrangement of shields or armor to the portholes of war vessels, or floating batteries, substantially as shown and described, by forming two or more plane or curved plates, impenetrable to shot, and arranged at such angles in relation to each other and to the side walls of said vessel or battery as to insure the glancing off of the projectiles thrown upon or against them as set forth.

Second, in combination with movable shields, operating as described, the convex-shaped or angular blocks, arranged to close the top opening between the shields and side walls, and to hold the said shields, when closed, at their requisite angles, substantially as shown and described.

Third, in combination with such movable shields, closing automatically or otherwise, in the manner described, so forming corresponding recesses to the inner edges of the shields as that the shields, by closing against the gun, shall leave a vertical space sufficiently narrow to prevent projectiles from penetrating, yet wide enough to allow of the gun being sighted through it.

No. 35,130.—SAMUEL VANSTONE, of Providence, R. I., assignor to WM. P. PIERCE, of Boston, Mass.—*Improvement in Machines for Cutting Files.*—Patent dated April 29, 1862.—Disks of steel having their edges bevelled are arranged in oblique positions upon a shaft, and secured between two nuts, so as to form a gang or series of cutters. Two of these gangs, placed one above the other, and between them the file blanks, are arranged on a sliding carriage. The shaft of the series of cutters has attached to it a weight by means of a cord passing over a pulley, by which means the cutters are made to partially revolve or oscillate when passing over the width of the file. The advantages of this arrangement of cutters are, that when one cutter is worn, it can easily be taken out and another substituted, and also when the cutting portion of the cutters becomes worn, the whole gang can be slightly revolved, and a fresh part brought into action.

Claim.—The two disk cylinders, operating simultaneously upon the two sides of the blank, in combination with the peculiar construction of the disk cylinders, substantially as described, for the purpose specified.

No. 35,131.—J. H. and A. E. REDSTONE, of Indianapolis, Ind., assignor to Themselves and JAMES M. RAY, of the same place.—*Improvement for changing a Rotary into a Reciprocating Motion.*—Patent dated April 29, 1862.—This invention will be understood by reference to the claim and engraving.

Claim.—The combination, in the manner described, of the groove C, slot D, and slide A, when operated, substantially as set forth.

No. 35,132.—JOHN ABSTERDAM, of New York, N. Y.—*Improved Composition for forming Journal Boxes, Bearings, &c.*—Patent dated May 6, 1862.—This invention is explained by the claim.

Claim.—A composition of sulphur and black lead, for filling and forming boxes for bearings of journals of shafts and axles, substantially as described.

Also, the employment of sulphur, in combination with mineral substances, to form a material or composition for bearings of journal boxes for shafts and axles, substantially as described.

No. 35,133.—S. W. BAKER, of Providence, R. I.—*Improvement for Printers' Lapping.*—Patent dated May 6, 1862.—This invention is designed to obviate the disadvantages arising from the use of the ordinary lapping. This lapping consists of an endless belt made without any perceptible seam or joint, and which is made to pass around the cylinder and over certain guiding rollers placed above, and capable of adjustment, so as to allow of the tightening of the lapping. This arrangement of the lapping, by affording an extended bearing surface, in connexion with its peculiar fabric, prevents the lapping from becoming hardened, and thus obviates many inconveniences arising from that hardness, as well as the frequent changes of the lapping.

Claim.—First, a lapping made in the form of an endless belt or band, and composed of one or more layers or thicknesses of thick woven material, either with or without a surface or coating of India-rubber or gutta percha, substantially as described.

Second, the method described, of printing textile fabrics, by the employment of an endless lapping, constructed substantially as described, so as to operate in the manner and for the purposes set forth.

No. 35,134.—CORNELIUS BERGEN, of Covert, N. Y.—*Improvement in Grain Separators.*—Patent dated May 6, 1862.—This invention consists in the combination with the raking apparatus of a longitudinally-slatted bed, having a vertical vibration at the forward end only, for the purpose of causing a more efficient action and perfect separation from the straw.

Claim.—The combination with the raking apparatus described of the longitudinally-slatted bed and the cams O, for the purpose of producing a vertical vibration at the outer end only, or end furthest from the threshing cylinder, substantially as and for the purpose set forth.

No. 35,135.—O. M. BUTTLES, of Milwaukie, Wis.—*Improvement in Stoves.*—Patent dated May 6, 1862.—This invention consists in arranging a circular flue at the top of the stove, in such connexion with the exit pipe that a single throttle valve or damper may turn the escaping products of combustion into the circular flue, or allow them to pass directly into the exit flue, as may be desired; the circular flue acting as a radiator to throw out the heat of the otherwise escaping products of combustion.

Claim.—The arrangement of the circular flue E at the top of the stove, and in such a position with regard to the exit flue as that a common valve *a* may turn the escaping products of combustion into either flue, substantially as and for the purpose described and represented.

No. 35,136.—J. G. CAIN, of Smith's Mills, Pa.—*Improved Combination of Table and Sink.*—Patent dated May 6, 1862.—The object of this invention is to combine with a dining table of any size and shape, a sink in which dishes may be washed, after they have been used on the table, thereby obviating the necessity of moving the dishes from place to place.

Claim.—A combined table and sink, composed of a water tank, hinged table-top A, and sliding shelves E E, the whole constructed in the peculiar manner shown and described.

No. 35,137.—J. H. CALKIN, of Troy, Pa.—*Improvement in Lubricating Axles of Wheels.*—Patent dated May 6, 1862.—This invention consists in the employment of a tube constructed in two parts, through which oil can be supplied to the axle, and so arranged that one part may fit within the other, and using in connexion therewith a cap or cover, so arranged as, when closed, to effectually exclude dust from the tube and also confine the oil therein, and at the same time admit of being readily opened when it is necessary to supply the tube with oil. The spring retains the cover of the cap down firmly. The object of this invention is to obtain a lubricating device which is capable of being so adjusted that it can be applied to hubs of different sizes or diameters, will admit of the axle being lubricated with the hub attached, and also be perfectly protected from dust.

Claim.—First, the oil-tube D, formed of two parts *a b*, arranged substantially as shown, to admit of being adjusted to suit hubs of different diameters or sizes, as set forth.

Second, in combination with the tube D, the cap E and spring F, constructed and applied to the tube, substantially as and for the purpose specified.

No. 35,138.—MARY P. CARPENTER, of Buffalo, N. Y.—*Improved Ironing and Fluting Machine.*—Patent dated May 6, 1862.—The fluting tubes are attached to stoppers fitting into appropriate holes in the plate, which permits of their ready removal when desired. The double front prevents the tubes from being heated to such a degree as to burn or scorch the fabric.

Claim.—First, the combination of the fluting tubes H, connected to the stoppers *g* with a furnace having a double front, for the purposes and substantially as set forth.

Second, attaching the fluting tubes to the stoppers *g*, for the purpose substantially as described.

Third, the front plate D, in combination with a fluting furnace, for the purpose and substantially as described.

No. 35,139.—GARDNER CHILSON, of Boston, Mass.—*Improvement in Sad-iron Heaters.*—Patent dated May 6, 1862.—The lower part of this heater is inserted into one of the pot holes of the stove, the flanch resting upon its surface. The series of heating conductors which extend down through the opening into the stove are designed to conduct heat to the plates against which the irons rest, and in connexion with the peculiar construction of these plates, which are thicker in the middle than at the edges, are designed to insure the uniform and speedy heating of the irons.

Claim.—The arrangement of the guard or heat retainer D, constructed substantially as described, with the pyramidal stand A and the shelf or flanch C thereof.

Also, the hollow, pyramidal stand A, with its sides or plates provided with a series of heating conductors G G, arranged with respect to them and so as to extend down through the opening D or base of such stand, substantially in the manner and for the purpose as set forth.

Also, a sad-iron heater composed of the hollow, pyramidal stand A, or the same and the guard D and the heat conductors G, and having the plates of the stand constructed substantially as described and for the purposes as set forth.

No. 35,140.—EDWARD COURT, of Coeymans, N. Y.—*Improvement in Brake for Wheel Vehicles.*—Patent dated May 6, 1862.—The slide is fitted on the perch by pins which pass through slots in the slide, and its rear end slides in a mortise in the bolster of the rear axle. Upon the rear bolster are pivoted shoe levers connected by rods to the slide, and provided at their ends with shoes which bear against the wheel, and are given a slight vertical movement by vertical guides. The front end of the slide is connected to a vertical lever pivoted to the front bolster, while the lower end of the lever is connected by a rod to the sliding rod M, to which the doubletree N is attached, the upper end of the rod passing through the doubletree and a slot in the draught link on the upper surface of the draught pole.

Claim.—The slide F fitted to the perch or reach C and in the back bolster *e*, as shown and described, in combination with the shoe levers G G, draught link O, lever K and rod L M. the latter having the doubletree N attached and placed underneath the draught pole E, all arranged as and for the purpose set forth.

No. 35,141.—E. J. CRIDGE, of Troy, N. Y.—*Improvement in Cooking Stoves.*—Patent dated May 6, 1862.—The novelty of this invention consists in the arrangement of parts named in the claim, which will be understood by reference to the engraving.

Claim.—First, the arrangement of the apertures or air passages *r o p* and *q* in combination with the continuous air space I J, oven D, fire chamber A, draught chamber C and fire flues E E′ E″, provided with a valve or damper W, as specified and shown.

Second, the arrangement of the deflecting plates *d d* in the upright portion of the continuous air space I J, arranged with the oven D, fire chamber A and fire flues E E′ E″, and having communication with the open air, the oven and the fire chamber above the fuel by the apertures or air passages *r o p* and *q*, respectively, as and for the purpose shown and specified.

No. 35,142.—W. H. DOANE, of Chicago, Ill.—*Improvement in Stave Machines.*—Patent dated May 6, 1862.—This invention relates to an improvement in that class of stave-cutting machines in which a reciprocating knife is used, and brought, at the termination of its cutting movement, against a bed plate which sustains the bolt. The object of the invention is to preserve the cutting edge of the knife, and also to graduate the pressure of a yielding roller, which is attached to the knife gate and placed in such a relative position with the knife as to insure the proper cutting of the staves from the bolt, all checking and splitting of the frame being avoided.

Claim.—First, the combination of the India-rubber strip F, plates *i* and *j* and screws *k* and *l*, for setting the same, both vertically and horizontally, when the said parts are so arranged in connexion with the bed piece A *a* and guides *f* as to afford a rigid bearing for the bolt on both sides of the elastic strip, and the whole employed in connexion with the reciprocating knife D of a stave-cutting machine, in the manner and for the purposes set forth.

Second, the combination of the India-rubber springs *p*, bearings or boxes *n* and screws *s*, fitted in the projections *r* of the end pieces *b* of the knife gate, all arranged and operating in connexion with the roller G and knife D of a reciprocating stave cutter, in the manner and for the purposes specified.

No. 35,143.—J. N. DUDLEY, of Mitchell, Iowa.—*Improvement in Portable Calenders.*—Patent dated May 6, 1862.—This invention consists in combining together a number of sliding rings having the year and names of the month and the names of the days of the week suitably printed or stamped on them with a column of figures, which, when all arranged on a stem in proper relation to the rings, will indicate the day of the month. The object of the invention is to produce a simple calendar which may readily be applied to a pencil case, match box, head of a cane or other similar article.

Claim.—The combination of the several removable rings *b c d a* with the column of figures B, arranged on a stem A, substantially as and for the purposes set forth.

No. 35,144.—O. P. DRAKE, of Boston, Mass.—*Improved Apparatus for Carburetting Air.*—Patent dated May 6, 1862.—The nature of this invention will be understood from the claim.

Claim.—The combination as well as the arrangement of a vaporizer, an air-forcing apparatus and an aerometer, the whole being constructed to operate together, substantially as described.

Also, the specified arrangement of the vaporizer and the air-forcing apparatus, whereby the shaft of the rotary frame of the vaporizer may be connected to and put in motion by the shaft of the rotary drum of the air-forcing apparatus.

Also, the air-inlet box Q, as made and applied to the case A and its shaft, and as provided with a pipe R, to operate as specified.

Also, the combination of the auxiliary air-pipe 3 3 with the aerometer and the vaporising and aerating apparatus, substantially as described.

Also, the combination of the annular air-vessel *g g* with the aerometer, when combined with a vaporizer and an aerating apparatus, as specified.

No. 35,145.—JAMES EATON, of Boston, Mass.—*Improvement in Spindles for Spinning.*—Patent dated May 6, 1862.—The object of this invention is to prevent the series of vibrations to which the thread is subjected in the use of ordinary spindles, caused by the thread slipping off from the end of the spindle. This is accomplished by forming the end of the spindle in a scroll, which may be of a form variously modified.

Claim.—As an improvement in spindles, in so forming the point that the thread will draw from the axes or centre of the spindle, substantially as set forth.

No. 35,146.—JACOB EDSON, of Boston, Mass.—*Improvement in Gas Regulators.*—Patent dated May 6, 1862.—This invention consists in attaching to the induction pipe a hollow receptacle, which is divided into two parts by means of a horizontal disk, whose edges rest on a flange in the interior of the receptacle, and which is allowed a slight vertical vibration. To the underside of the disk is attached a hollow vertical rod which extends into the induction pipe, and when raised up or down closes or opens the aperture. The vertical cut-off rod is made hollow for the reception of shot, by which its weight can be regulated in proportion to the pressure. Extending through the upper part of the receptacle is an adjustable rod, by which the disk can be prevented from moving too far upward.

Claim.—First, the combination of the floating disk or diaphragm *d* and hollow die cut-off or valve rod *h* with any suitable-shaped receptacle or reservoir of the induction pipe, for the purpose specified, and arranged therein and operating substantially as described.

Second, constructing the cut-off in a hollow shape, by means of which it can be readily increased or lessened in weight at pleasure, for the purposes set forth.

Third, the adjustable rod *m*, or its equivalent, for the purpose described.

Fourth, in so constructing the die cut-off and arranging it in the induction aperture of the apparatus, that when pulled or forced up through the same it will scrape or cut off the coal tar, &c., deposited or collected upon their surfaces.

No. 35,147.—E. T. FORD, of Stillwater, N. Y.—*Improved Plough Beam.*—Patent dated May 6, 1862.—To the rear end of the main beam is united the rear section, which is provided with slots so as to allow of its adjustment to the right or left. The front section consists of two flanged pieces placed on each side of the main beam, and is connected to the rear section by side rods. These side rods pass through the cross bar near its extremities, and the slot upon the under side of the cross bar, through the lower part of which the centre bar passes, prevents the rods from turning it to either the right or left.

Claim.—The peculiar arrangement and construction of a truss plough beam, consisting of the sectional parts, the rear section *g*, front section I, cross bar X, the side rods V V and the double box *c c*, as connected to the centre bar *e e*, the whole combined as described and represented.

No. 35,148.—THOMAS FOWLDS, of Treverton, Pa.—*Improvement in Ordnance.*—Patent dated May 6, 1862.—In the breech of the cannon is bored a small circular hole, in which is screwed a pin traversing in a longitudinal passage, and which projects into the chamber of the cannon. A transverse passage is made in the end of the tube, thus forming a communication with the chamber of the cannon. The rear extremity of the screw plug is pointed, so that the cartridge when driven home is opened. Screwed within the passage of the screw plug, but having on it threads much narrower than the grooves on the interior of the passage, is a rod termed the nipple, one end of which is provided with a head, and on the other end is

a percussion cap. When the cannon is to be discharged, a sharp blow on the head forces the cap against the shoulder on the screw plug which explodes it, and the fire is communicated through the tranverse passage to the charge. The screw thread on the nipple prevents it from being driven out, but allows sufficient play for the blow to be effective.

Claim.—First, the combination of the narrow screw thread *s h*, of the cap nipple E and the wide screw grooves *f*, of the screw pin D, with a cannon, substantially as and for the purposes set forth.

Second, the combination of the sharp point *r* with a hollow screw pin D D′, substantially as and for the purpose set forth.

Third, the combination of the shoulder *i* and passage *d* with a hollow screw pin D D′, substantially as and for the purpose set forth.

No. 35,149.—L. F. & F. W. LETMATE, of New York, N. Y.—*Improved Composition for making Printers' Inking Rollers.*—Patent dated May 6, 1862.—This invention consists in the employment of glue properly combined with glycerine and castor oil, or any of the fixed oils, to form a composition from which printers' inking rollers may be made. The object is to obtain a roller which will not be effected by the changes of the atmosphere.

Claim.—The use or employment of glue properly combined with glycerine and castor oil, or any of the fixed oils, to form a composition for the manufacture of printers' inking rollers

No. 35,150.—KASSON FRAZER, of Syracuse, N. Y.—*Improvement in Buckles, Rings, &c.*—Patent dated May 6, 1862.—The nature of this invention consists in connecting the ends of wire used in the construction of buckle frames by means of a dovetail or ball and socket connexion.

Claim.—The method described of connecting the ends of wire rod used in forming buckle frames and rings; that is, when the two ends are firmly joined together by interlocking, substantially as stated and for the purpose set forth.

No. 35,151.—WILLIAM FULTON, of Elizabeth City, N. J.—*Improved Coal Oil Lamp Cone.*—Patent dated May 6, 1862.—This invention consists in using a cone constructed like those ordinarily used, with the exception that, instead of a slot on the top for the flame to pass through, there is a smooth round hole, surrounded by a perforated spring plate, serving to regulate the elastic force of the air, and thereby insure a steady flame.

Claim.—First, the perforated spring plate D, as shown, or its equivalent, for regulating the elastic force of the air, so that it may be presented evenly to the flame, and as a rest, which accommodates itself to the bottom of the chimney.

Second, the construction of the cone B, as shown, in combination with the perforated shell K, as shown, and the gauze wire P, as shown, the whole being arranged substantially as and for the purpose set forth.

No. 35,152.—PETER HOGG, of Brooklyn, N. Y.—*Improvement in Hydrometers.*—Patent dated May 6, 1862.—This invention consists of a tube, having its lower end closed by a flexible diaphragm, forming a hydrometer, by which the specific gravity of liquids can be ascertained at any temperature. The tube, being filled with water to a certain point, is placed in a vessel of water, and plunged up to that point into the liquid to be tested, when the water contained within the tube will be brought to the same temperature as the surrounding liquid; and, according as the specific gravity of such liquid which is in contact with one side of the flexible diaphragm is greater or less than that of the water in the tube which is on the other side of the said diaphragm, the column in the tube will be caused to rise and fall, and, the tube being properly graduated, will have the specific gravity of the liquid indicated within it by the height of the column of water. The hydrometer may be placed within an inverted siphon, through which the liquid to be tested may flow constantly, thus enabling the specific gravity of the liquid to be ascertained upon inspection of the tube.

Claim.—First, a hydrometer composed of a tube for containing water or other liquid, fitted with a flexible diaphragm, and operated substantially as specified.

Second, the employment, in combination with the tube A and diaphragm B, of an inverted siphon pipe E E′, the whole constituting a stationary apparatus for testing the density of liquids, and operating essentially as and for the purpose specified.

No. 35,153.—B. B. HOTCHKISS, of Sharon, Conn.—*Improvement in Explosive Projectiles.*—Patent dated May 6, 1862.—This invention is applicable to all forms of explosive projectiles, and consists in coating the interior of the shell with a solution of shellac, to which the filling adheres, and then solidifying the powder by the use of a solution of collodion, which after evaporation leaves the powder in a solid mass, thus avoiding danger of explosion arising from friction of the grains of powder among themselves, or against the interior of the shell, and also serving the purpose of confining bullets in shrapnell shells instead of the resin commonly used.

Claim.—First, an explosive projectile in which the contents are solidified, substantially in the manner and so as to secure the advantages set forth.

Second, the employment in such projectile of an adhesive lining C, substantially as described, so as to increase the adhesion of the solidified contents to the interior of the shell.

No. 35,154.—T. W. HOUCHIN, of Morrisania, N. Y.—*Improvement in Night Lamps.*—Patent dated May 6, 1862.—This invention relates to the construction of the wick sustainer in lamps burning wax or composition tapers, and consists of a concave circular piece of metal provided with a central opening through which the wick passes, and has a portion of its periphery bent up sufficiently to form an opening in the same, on which the lower end of the wick rests. The portions of metal turned up in punching the opening are allowed to remain and form ears or lips for griping and retaining the wick in the body of the taper. The peculiar construction of the sustainer permits the use of oil for burning, which may be contained either in the lamp C or the recess in the stand.

Claim.—First, the use or employment of a wick sustainer, constructed as shown in Fig. 3 C, for the purpose specified.

Second, the use or employment of the wick sustainer, as shown in Fig. 3 C, in combination with the stand A, lamp C, taper E, and shade F, when the same shall be combined and operated for the purpose shown.

Third, combining a wick sustainer I, constructed as shown in Fig. 4, with a circular float J, of cork or other suitable material, for the purpose described.

No. 35,155.—CHARLES HOWLETT, of Hartford, Conn.—*Improvement in Balances.*—Patent dated May 6, 1862.—To one of the bearing points is attached the indicator, moving on a graduated scale upon the plate, while to the other is fastened a rod, having on its extremity a hook, to which the weight is fastened. When the weight is attached the plate moves upwards past the indicator, and returns to its original position when the weight is removed.

Claim.—The combination of the bearing points C C, weight F, and indicator B, arranged as a self-indicating balance, substantially as described.

No. 35,156.—H. W. HUNTER, of New York, N. Y.—*Improvement in Magnetic Compasses.*—Patent dated May 6, 1862.—The nature of this invention consists in the application to pocket compasses of a floating card similar to those used in ships' compasses, and which, by being colored in the manner described in the claim, enables it to be used at night without artificial illumination.

Claim.—A floating compass card B, formed with its upper surface divided into one-half white and the other black, with the exception of the star-point lines *c′ c″*, which are black on the white and white on the black section, as described and for the purposes set forth.

No. 35,157.—H. C. HUTCHINSON, of Cayuga, N. Y.—*Improvement in Burners for Lamps.*—Patent dated May 6, 1862.—The object of this invention is to prevent lateral draughts of air from interfering with the supply of air to the flame, thereby causing the lamp to smoke. This is effected by having the oil receptacle of the lamp covered with a shell, which also covers the draught openings of the burner, and is provided with longitudinal partition plates. Another object of the invention is to enable the wick to be evenly trimmed, and for that purpose the upper end of the wick tube is rounded or scalloped.

Claim.—First, a central draught entering above the lamp through the lateral air tubes E E, leading to the inner chamber G, closed at the bottom and surrounded by the wick at the top.

Second, the perforated basin C C, so constructed as to cause a counterpoise air pressure against the openings of the air tubes E E when the lamp is suddenly raised.

Third, a round or oval hollow wick formed around the central tube of the burner from two flat strips hanging loose in the lamp.

Fourth, the screen or perforated guard K, made to a flat, conical, or convex form across the inner chamber.

No. 35,158.—J. H. IRWIN, of Beardstown, Ill.—*Improvement in Coal-oil Lamps.*—Patent dated May 6, 1862.—This invention consists in having the burner of the lamp or draught passages which communicate therewith provided with partition plates, so arranged that horizontal or lateral currents of air below the flame of the lamp are prevented, and also in having the upper end of the wick tube of rounded or of scalloped form, so as to avoid angles, the apex or top of the cone or deflector around its orifice or slot being of corresponding form.

Claim.—First, having the draught passage of the lamp divided into compartments by partition plates *b* or *b′*, so arranged as to prevent horizontal or lateral currents of air through the draught passage or burner below the flame, substantially as and for the purpose set forth.

Second, having the upper end of the wick tube C made of rounded or scalloped form, in combination with a cone or deflector B, having its apex or top around its slot *f* made of corresponding form, as and for the purpose set forth.

No. 35,159.—JOHN ISEMAN, of Rosston, Pa.—*Improvement in Joiners' Squares.*—Patent dated May 6, 1862.—This invention consists of an ordinary metallic square, each arm of which is provided with a longitudinal slot, and secured in a slotted straight edge by pins, so as to be capable of adjustment in any position. The different parts of the square and straight edge are graduated, so that the device can be used to ascertain the proper length of rafters for a roof; span and height being ascertained by so adjusting the square as to have one side represent the height of the roof and the other half the span, when the part of the stock be-

tween the points of intersection with each arm of the square will represent the length of the rafter. This improvement is also capable of adjustment, so that it can be used as a T square, a trying square, or a metre, as may be desired.

Claim.—The combination of the square A and straight edge B, arranged and connected together as and for the purpose set forth.

No. 35,160.—A. H. LEPLAY and J. F. J. CUISINIER, of Paris, France.—*Improvement in Revivifying Animal Charcoal for Refining Sugar.*—Patent dated May 6, 1862.—In order to revivify the animal charcoal used in clarifying saccharine liquors, and which becomes saturated with ammoniacal odorous impurities, the saccharine liquor is allowed to run out from the filter, and into its lower part is introduced a jet of steam which passes through the grains of charcoal. The ammoniacal salts removed by the black are immediately decomposed and the ammonia is conducted from the closed filter by means of a pipe. The revivification is facilitated by adding on the top of the filter, at the same time that the saccharine liquor is allowed to flow out, some milk of lime. In order to revive in the animal black the power of absorbing lime, two processes are made use of, one consisting in pouring upon the acidulated solution which forms with the lime a soluble salt, while the other consists in pouring upon the charcoal a solution of monobasic phosphate of lime. When the absorbing properties of the charcoal can no longer be restored by the introduction of steam, the addition of a solution of carbonate of soda in connexion with the steam will revive it.

Claim.—First, the method described of revivifying animal black or charcoal by hot water or steam, in combination with milk of lime used in the filtering vessels, substantially in the manner and for the purpose set forth.

Second, the method described of clarifying saccharine liquors, juices, and sirups, by means of phosphates, substantially as set forth.

Third, the manner of operating and effecting by means of the different processes described, the revivification of animal black or charcoal so as to allow of the collection of the ammonia given off in the revivification.

No. 35,161.—C. C. LEWIS, of White Water, Wis.—*Improved Soap*.—Patent dated May 6, 1862.—The ingredients used in the manufacture of this soap are one hundred and thirty-six parts of lye, one hundred parts of Fuller's soap, one hundred parts of "kaolin," six parts of ammonia, and three parts of borax.

Claim.—The use of the specified ingredients for the purpose of making soap, substantially in the specified proportions and for the purpose set forth.

No. 35,162.—W. A. LIGHTHALL, of New York, N. Y.—*Improvement in Refrigerators for Steam Engines*.—Patent dated May 6, 1862.—This invention relates to an improvement on refrigerators, for which letters patent were granted to the said Lighthall, February 26, 1861, and it consists in returning the injection water from one section of the refrigerator to the other, through a case or division, by which means the cooling water is made to pass through the tubes of the refrigerator in one direction, while the heated injection water, after passing through the bed plate, air pump, and hot well, to the refrigerator, passes around and among the tubes in a contrary direction; the object being to expose the injection water as it leaves the apparatus to the coolest portion of the refrigerating water.

Claim.—The combination of the diaphragm plates F F′, with the tubes C and division plates B, arranged and to be operated as and for the purpose set forth.

No. 35,163.—HENRY LŒWENBERG, of Boston, Mass.—*Improvement in the Mode of Making Button Holes*.—Patent dated May 6, 1862.—In order to form a button hole by this method a sheet of gutta percha or cloth covered with that material is interposed between the two layers of cloth, which is then pressed between two dies that are heated to such a degree as to melt the interposed gutta percha. One of these dies has a thin knife-like projection which passes through the slit; sufficient pressure is then given to the dies to cause the gutta percha to incorporate itself with the cloth and form around the button hole an edge having the appearance of being stitched.

Claim.—The new method, substantially as described, of making either button or eyelet holes, such involving the employment of dies, heat pressure and gutta percha, or its equivalent, substantially in manner as specified.

No. 35,164.—S. M. LOGAN and P. E. BAKER, of New Carlisle, Ohio.—*Improvement in Terra Cotta Roofing*.—Patent dated May 6, 1862.—Each tile is provided with a rim along its side, which, when the tiles are placed in position, form the joints which are covered by the caps, thus making the joints water-tight.

Claim.—First, the use of the caps *a a* for covering the joints in the manner set forth and described.

Second, the caps, in combination with the laps *b b*, in the manner and for the purpose set forth and described.

No. 35,165.—GORDON MCKAY, of Boston, Mass.—*Improved Process of Sewing the Soles of Boots and Shoes*.—Patent dated May 6, 1862.—The object of this invention is to enable the seam to be made completely around the shoe, thus facilitating the sewing and making a stronger seam.

Claim.—The described process, in sewing the soles upon boots or shoes, of changing relatively the positions of the boot or shoe and the horn, substantially as described.

No. 35,166.—A. G. WILKINS, of Cooperstown, Pa.—*Improved Washing Machine*.—Patent dated May 6, 1862.—This machine consists of a slatted carrier, upon which the clothes are confined by cords, and which passes over two rollers of unequal size, placed near opposite ends of the tub. Under the carrier, at about its middle, is placed a fluted roller, over which the said carrier passes, and by which the clothes are exposed to a rubbing and squeezing process. The bearings of the larger roller are allowed a longitudinal movement, for the purpose of tightening the carrier. The shafts of the fluted roller rest in two vertical arms, provided at their extremities with screw-heads; thus giving the roller a vertical movement, and enabling it to hold the slatted carrier stationary, so that it can be used as a hand wash-board, if desired.

Claim.—First, the arrangement of the larger roller B, smaller end roller C, central fluted roller D, and inclined slatted carrier F, within a washtub, in the manner and for the purpose substantially as described.

Second, the arrangement of the platform E, slatted inclined carrier F, large roller B smaller roller C, fluted roller D, longitudinal screw rods *d d*, and vertical screw arms *g g*, in the manner and for the purpose described.

Third, the arrangement of the clothes-confining cords *a*, across the slatted carrier, in an organization such as described, for the purpose set forth.

No. 35,167.—EDMUND MAHER, of New York, N. Y.—*Improvement in Repeating Fire-arms*.—Patent dated May 6, 1862.—This invention relates to that class of guns having movable magazines or charged cartridge-chamber bars at the open breech-end of the barrel, and it consists in the arrangement of peculiarly formed grooved cams, secured on a horizontal revolving shaft, immediately below the said magazine or chambered bar, and in such relation to studs or pins and grooves on the lower surface of the same, as by its continued rotation to successively move the cartridge-chambers in the bar immediately opposite the breech-end of the barrel, and hold them in that position the required time to be fired; thus attaining the greatest accuracy in the position of the cartridge-chamber relatively to the bore of the gun, and by means of the rigid tongues and grooves, combined with studs and right-angled portions of the flanches of the cam, firmness of hold at the time of firing, at the same time allowing the parts to move out of contact, without friction, at each adjustment of the chamber-bar. The invention also consists in providing a means of moving the gun a slight distance, simultaneously with every movement of the chambered bar, past the breech of the gun-barrel.

Claim.—First, the combination of the rib A, flanched and grooved hub F G′, and recesses or grooves S of the chambered bar C, substantially in the manner and for the purpose described.

Second, combining with the gun the ring I, friction-pall K, with slotted arm, and the parts attached thereto, for giving a slight movement to the gun on its pivot, at every revolution of the transverse shaft F, as fully set forth.

No. 35,168.—W. V. MCKENZIE, of Jersey City, N. J.—*Improvement in Oil Presses*.—Patent dated May 6, 1862.—This invention is intended as an improvement on that class of oil presses for which letters patent were granted to D. L. Lalourette, October 28, 1851, in which a series of parallel sliding plates were used, each serving as a press-box on one side, and as a follower on the other, the several press-boxes being provided at the top and bottom with suitable doors. The use of the doors gave rise to many inconveniences which this invention is designed to obviate. The invention consists in the employment of a slide passing over the top of the several press-boxes, and through slots formed in the upper portion of the sliding plates, in such a manner that by inserting said slide the several press-boxes are completely closed on the top, and an additional guide for the sliding plates is obtained. It consists, further, in the employment of a sliding key passing through slots in the lower parts of the sliding plates, in combination with the hinged doors, at the bottom of the several press-boxes, in such a manner that by the action of the key, the doors are prevented from being forced open, when the operation of pressing commences, and they are not liable to become injured by catching against them.

Claim.—First, the employment of the slide G, in combination with the press-boxes A′ B′ C′, constructed and operating as and for the purpose shown and described.

Second, the arrangement of the key H, in combination with the hinged doors *a′ b′ c′*, at the bottom of the press-boxes A′ B′ C′, constructed and operating as and for the purpose specified.

No. 35,169.—MATTHIAS MEAD, of Lowell, Mass., assignor to SAMUEL RANDALL, of the same place.—*Improvement in Drawing Cans for Cotton Rovings*.—Patent dated May 6, 1862.—This invention consists in attaching to the body of the common tin can a bottom constructed of such material, that it will have sufficient strength to resist for a very long time the wear and tear to which it is exposed, while at the same time it renders the can no heavier to handle than as usually constructed.

Claim.—First, a drawing can constructed substantially as and for the purpose described.

Second, forming the bottom of a drawing can of one piece of raw or green hide, substantially as and for the purpose described.

No. 35,170.—A. A. PEATT, of Greenfield, Mass.—*Improvement in Shackle for Connecting Thills to Axles.*—Patent dated May 6, 1862.—This invention consists in having the back ends of the irons of the thills bent in hook-form, and fitted in eyes which are attached to the axle, where they are secured by centre bolts and nuts; the object being to obtain a shackle or thill-coupling which, besides being simple in construction, and forming a strong and durable connexion, will, in case of breakage, possess in itself a means to form a temporary connexion, and thus prevent the detachment of the thills from the axle, and to avoid the application or use of the ordinary "safety-straps" now employed.

Claim.—The iron A, provided with the hook B, in combination with the eye D, and the bolts C C, or their equivalents, substantially as and for the purpose set forth.

No. 35,171.—R. P. PARROTT, of Cold Spring, N. Y.—*Improvement in Hooped Ordnance.*—Ante-dated Nov. 6, 1861.—Patent dated May 6, 1862.—The body of the gun does not differ from that of cast-iron guns of the ordinary description, but it is provided with a reinforce consisting of a wrought-iron cylinder formed by cooling a bar of iron upon a mandrel, and welding together the several turns of the coil. The reinforce is heated and placed upon the body of the gun, so as to extend a distance equal to one calibre in rear of the bottom of the bore, and a distance equal to one calibre in front of the charge of powder. The gun is then rotated, and a current of water introduced into its bore, so as to cause the reinforce to contract. By this means great strength is given at the point of greatest strain, without great weight of metal. The screw plug is designed to counteract the strain on the bottom of the breech, and consists of a plug which fits into a corresponding opening in the breech, said plug being of larger diameter in the rear than in front, and being provided at that part with a male screw which fits a female screw counter bored in the body of the gun.

Claim.—A gun made as shown and described; the arrangement of the screw-plug *c*, constructed as shown with the said gun, as set forth.

No. 35,172.—SAMUEL RAINBIRD, of Norwich, England.—*Improvement in Grappling and Raising Sunken Vessels, &c.*—Patent dated May 6, 1862.—This invention consists of a method of raising vessels by means of grappling chains, which are made to surround and clasp the vessel, and in connexion with a combination of air cylinders and windlasses. The invention does not admit of a detailed description.

Claim.—First, the mode or modes of grappling sunken vessels and other submerged bodies, by the peculiar arrangement of chains, as described.

Second, the mode or modes described of raising sunken vessels and other submerged bodies by balancing a portion only of the weight by air vessels and then raising the sunken vessels or other submerged bodies by means of windlasses or similar machinery.

Third, the apparatus described, consisting of air cylinders or vessels divided into compartments traversed by tubes with stoppers for securing the grappling chains and movable escape-pipes or radial tubes for the escape of the water, together with valves capable of being worked by chains or ropes and other appurtenances, as described.

Fourth, the combination of air-vessels and chains or ropes with windlasses or other lifting machinery, in manner described, for the purpose of grappling and raising sunken vessels or other submerged bodies, by such combined apparatus as described.

No. 35,173.—C. E. RANKIN, of New York, N. Y.—*Improved Album Case.*—Patent dated May 6, 1862.—This invention consists in combining two ordinary daguerreotype cases with a book cover, and with a series of split leaves made to receive photographs or other pictures in such a manner as to form an album case, in which daguerreotypes or ambrotypes, as well as photographic pictures, can be preserved.

Claim.—A new article of manufacture, the described combination of the daguerreotype cases A B, with the photographic leaves D and book cover C, as and for the purpose shown and specified.

No. 35,174.—J. H. REDSTONE and A. E. REDSTONE, of Indianapolis, Ind.—*Improvement in Valves for Steam Engines.*—Patent dated May 6, 1862.—Reference to the description and drawings will be necessary for an explanation of the construction and operation of this device.

Claim.—First, the hollow valve A, when constructed as set forth and operated in connexion with the steam passages H I and K L.

Second, the valves F and G, when constructed and operated as set forth.

No. 35,175.—E. B. REQUA, of Jersey City, N. J.—*Improved Lamp.*—Patent dated May 6, 1862.—The claim and engraving explain the nature of this invention.

Claim.—First, the combination of the two tubes G J, one placed within the other, and the inner one enclosing the wick tube E, when said tubes are provided respectively with

cones or deflectors H I, so constructed as to admit of a space *e* between them, having a narrow passage *e'* to increase the rapidity of the draught, and cause a quick current of air to impinge against the sides of the flame *j*, substantially as and for the purpose set forth.

Second, providing the lower end of the wick tube E with a cap F, to serve as a top for the fountain A, when said cap is used in connexion with the tube G, applied to the burner D, the latter screwed into the jacket or case B, and all arranged as shown, to form a simple device to admit of the flame being supplied with a requisite quantity of air at its base, and by a current which passes around the fountain A, to keep its contents cool, as described.

Third, insulating the cones H I from their respective tubes G J, by means of plaster of Paris, or other good non-conducting cement, for the purpose of preventing the heat being conducted down to the burner and fountain, as set forth.

Fourth, the combination of the two tubes G J, cones H I, wick tube E, cap F, burner D, flanch *g*, jacket or case B, and fountain A, all arranged as and for the purpose specified.

No. 35,176.—A. K. RIDER, of Hydeville, Vt.—*Improved Cut-off Valve.*—Patent dated May 6, 1862.—This invention consists in the construction of the cut-off valve, with its ends oblique to the direction of the movement of the main valve, and in so applying the said valve to the back of the main valve that it may work transversely thereto without interfering with the longitudinal movement of the latter valve, which has the outer orifices of its steam ports arranged obliquely, to correspond with oblique ends of the cut-off valve. This construction of the valve seats and ports permits the point of cutting off to be varied throughout the whole length of the stroke of the piston by the transverse movement of the cut-off valve, either by hand or by the governor.

Claim.—First, the cut-off valve G, having its end or ends oblique to the direction of the movement of the main valve, and applied to the latter valve in combination with a stem *f*, or its equivalent, by which it is moved transversely to the main valve, and operating substantially as described, in combination with an oblique arrangement of the outer orifices of the main valve ports, for the purpose set forth.

Second, combining the stem *f* of the so-constructed and applied cut-off valve with a governor, by means of a handle or hand lever *l*, dog *m*, a sector plate *p*, and an arm *q*, substantially as and for the purpose described.

No. 35,177.—E. Y. ROBBINS, of Cincinnati, Ohio.—*Improvement in Ventilation.*—Patent dated May 6, 1862.—This improvement consists in a method of applying the heat to the entire lower part of the room which it is desired to warm, so that it shall be as warm at the floor as at the ceiling. A large metallic warming surface, kept at a low temperature, is made use of, against which the fresh air, which is afterwards to be admitted into the room, is made to circulate, so as to warm it only to such a degree that when it enters the room it shall remain in the lower part, where it is wanted for respiration, and not rise at once to the ceiling, as in the usual mode of heating.

Claim.—First, the arrangement of the hot-air chamber or reservoir of heat, for warming the floor and lower part of the rooms, in connexion with the arrangement for the introduction at the bottom of the room of moderately-warmed fresh air which has not been in contact with the hot metallic surface either of hot-water pipes or steam pipes, or of a stove or furnace, or any other highly-heated surface, substantially as set forth.

Second, the use of the lower and outer boundary of the hot-air chamber as a large non-metallic warming surface for the purpose of warming, to a moderate degree, the fresh air before it enters the room, substantially as set forth.

Third, in case of warming the upper rooms by the waste heat of the fire in the lower story, the arrangement of an inner smoke flue within the brick flue or chimney E, Fig. 3, and the diaphragm, Fig. 5, for turning the current of hot air rising between this inner smoke flue of the sides of the chimney inward under the floor of the upper room for warming it, or any equivalent device between.

Fourth, in using hot air pipes for warming cars or rooms, the making of said pipes in their different parts of different materials and of different shapes, so that their conducting and radiating power shall increase as the distance from the furnace or source of heat increases, and as the temperature of the air within them decreases, so that they shall distribute the heat as nearly uniformly as possible throughout their entire length, substantially as set forth.

No. 35,178.—H. E. ROBBINS, of Hartford, Conn.—*Improvement in Tobacco Cases.*—Patent dated May 6, 1862.—In the bottom of the tobacco box is placed some fibrous or porous substance, which is kept saturated with any proper liquid, and over this is placed a perforated plate, so that the vapor arising from the liquid diffuses itself through the tobacco contained in the box, and thus keeps it in a moist state.

Claim.—As a new article of manufacture a pocket tobacco box, constructed substantially in the manner as and for the purpose as described.

No. 35,179.—WATSON SANFORD, of Brooklyn, N. Y.—*Improvement in Dampers.*—Patent dated May 6, 1862.—This invention consists in surrounding the stove or furnace pipe with

a collar in which is made an opening, communicating with the interior by a register valve, also provided with an opening; said valve is received in a recess formed in a flange attached to the pipe collar. By opening the valve, air may be admitted into the stove above the fuel, thus regulating the draught, and also ventilating the room.

Claim.—The valve or register C, when combined with the pipe collar and its flange, and applied to a stove or heater, for the purposes and substantially in the manner described.

No. 35,180.—WATSON SANFORD, of Brooklyn, N. Y.—*Improvement in Hot-Air Furnaces.*—Patent dated May 6, 1862.—The object of the first part of this invention is to construct a furnace in few pieces, and thus avoid danger of leakage, owing to the difficulty of forming gas-tight joints. The object of the second part of this invention is to obtain great strength and extent of heating surface. The object of the third and fourth part of this invention is to provide for the thorough heating and combustion of the gases given off, and also diffuse the heat equally over the whole fire pot.

Claim.—First, casting the fire pot and dome, or the section between the red lines 1 1 and 2 2, or any greater section, either above the line 1 1, or below the line 2 2, together with the first section of smoke flues or pipes, all in one piece, substantially as and for the purposes described.

Second, forming the fire pot, as well as the lower section of the dome, with corrugations which shall be continuations of each other, the interior concave parts of which form the exits for the smoke or the commencement of the smoke flues, as and for the purposes set forth.

Third, providing the furnace or heater with an enlarged dome *b*, in combination with the extension of the corrugations or smoke flues D, by means of the corrugations *f*, or their equivalents, down to or below the surface of the fuel charge, substantially as set forth.

Fourth, in combination with the enlarged dome and corrugations or smoke flues so located; that is, extending down to or below the surface of the fuel charge, the distribution of the smoke exits all around the body of the fire pot and near together, so as to make regular corrugations, for the purposes and substantially as indicated.

No. 35,181.—WATSON SANFORD, of Brooklyn, N. Y.—*Improvement in Stove Lining.*—Patent dated May 6, 1862.—This invention consists in casting the fire pot with two vertical corrugations, and also providing its inner surface with pins and ribs, which project out a little distance and serve to retain and preserve the fire clay more equally, diffuse the heat, and keep the fuel from contact with the clay, and thus permit a free circulation of air. This fire pot can be used as a guard or lining to a fire pot of the usual construction.

Claim.—First, the pins *b*, as and for the purpose specified.

Second, the combination of the pins *b* with the corrugations *a* or cells or panels *c d e*, substantially as and for the purpose set forth.

Third, the combination of the pins *b* and corrugations *a* with the ribs *h*, in the manner and for the purpose indicated.

Fourth, when this invention is used as a guard-plate or lining, the exterior concave portions *f* or channels *g* for the purpose of admitting air between the said guard-plate or lining and the shell of the stove or furnace, as set forth.

No. 35,182.—JOHN SHAEFER, of Lancaster, Pa.—*Improved Attachment for Bedstead Rails.*—Patent dated May 6, 1862.—The slotted plates are attached to the post of the bedstead, while the hooked plates are attached to the ends of the rails; the position of the plates being reversed in each, so as to cause the diagonal line between the hooks on one end to be in a direction opposite to the diagonal line between the hooks on the other end.

Claim.—The diagonal combination of the bevel-slotted plate A with the bevel-hooked plate B, the whole being constructed and arranged and attached in the manner and for the purpose specified, substantially as set forth.

No. 35,183.—D. C. SMITH and W. P. WALLING, of Adrian, Mich.—*Improvement in Water Elevators and Conveyers.*—Patent dated May 6, 1862.—This invention relates to that class of water-elevating and conveying machines in which the buckets or pails are connected to carriages that run on inclined wires or ways from the well or spring to the place desired, the wires being suspended by suitable shores.

Claim.—The combination with carriage K of the plate M, arranged to work in joint operation with spring T, pawl 12, incline planes X X, clamps V V and lug 18, for the purpose set forth.

Also, in combination with the foregoing, the bail 2, rod 3, and cover 4, connected together as described and for the purpose specified.

No. 35,184.—H. J. SMITH and WOODRUFF JONES, of Philadelphia, Pa.—*Improvement in Apparatus for Testing Coal Oils and other Mixed Liquids.*—Patent dated May 6, 1862.—This invention consists in determining the amount of volatile inflammable matter in compound liquids by means of a thermometer and a flame, the thermometer being applied to the liquids while heat is imparted to the latter and the vapor generated by the heat being directed to the flame, which will cause the vapor to explode, the degree of heat indicated by the thermometer when the explosion takes place determining the amount of volatile inflammable matter in the liquids.

Claim.—Determining the amount of volatile inflammable matter in compound liquids by means of a thermometer and a flame, the thermometer being applied to the liquid while the heat is imparted to the latter and the vapor generated by the heat being directed to the flame, substantially as set forth.

No. 35,185.—J. P. SMITH, of Hummelstown, Pa.—*Improvement in Corn Shellers.*—Patent dated May 6, 1862.—The shifting breast beam serves to sustain the ears of corn while being shelled, and has attached to it a hand lever by which the operator moves it a sufficient distance from the cylinder to let out the shelled cob. This beam is provided with a stem which slides in bearings in the frame, the beam being kept against the cylinder by a spiral spring. The shelling bar, being situated above the breast beam, serves to hold the ears against the cylinder, and is provided with a stem sliding in bearings in the frame and attached to a spring, by which the beam is enabled to accommodate itself to ears of corn of different sizes.

Claim.—The shifting breast beam *n* arranged and operating in combination with the shelling cylinder *d*, substantially as and for the purpose specified.

Also, the combination of the shelling bar *j* with the shelling cylinder *d* and shifting breast beam *n*, substantially as set forth.

No. 35,186.—O. W. STEARNS, of Johnson, Vt.—*Improvement in Wooden Tubing.*—Patent dated May 6, 1862.—This tubing is constructed of two semi-cylindrical channelled pieces of wood, which are matched together and then secured by wire around them. The joints or sections are connected by metallic rings or ferrules, and the whole covered with some durable paint or coating.

Claim.—The tube formed by the combination and arrangement of the parts A A, ferrule B, strainer C, matching pieces D D, channel E, and wire F F, or its equivalent, substantially as described.

No. 35,187.—R. VAN ORMER and W. J. BELL, of McAllisterville, Pa.—*Improvement in Balancing Millstones.*—Patent dated May 6, 1862.—The balancing weight which encircles the runner consists of two rods of iron united at one end by a spring, at the other by a screw provided at each extremity by screw nuts. The spring is placed upon the light side of the stone, the screw on the heavy side, and, by adjusting the nuts, a perfect balance is effected whether the stone is at rest or in motion.

Claim.—The combination of the rods R R′, spring S, and screw S′, in the manner and for the purpose shown and described.

No. 35,188.—W. H. WHITE, of Woodbury, Conn.—*Improvement in Sheep Shears.*—Patent dated May 6, 1862.—By making the different parts of the shears in separate pieces and of different kinds of metal, and then securing them together, the cheapness, lightness, and effectiveness of the shears is increased.

Claim.—The described article called a sheep shears, made substantially in the manner described, and consisting of a steel bow, iron handles, and cutting edges, arranged and attached to each other substantially in the manner set forth.

No. 35,189.—J. P. WALTER, of Brooklyn, N. Y.—*Improvement in Vacuum Tanks.*—Patent dated May 6, 1862.—This invention consists in the application to the vacuum tanks which are used for cleaning sinks, &c., of one or more air pumps, which are operated by a working beam, receiving its motion from an eccentric attached to one of the wheels of the truck that supports the tank, in such a manner that the air can be exhausted from the tank while it is driven to the place where the contents are deposited, so that it can, after being emptied, be ready to receive a new charge. Attached to the tank are suitable reservoirs containing suitable acids or charcoal through which the air, as it is exhausted from the tank, is forced and thereby deprived of its offensive qualities.

Claim.—First, the arrangement of one or more air pumps B in combination with the wheels D D′, eccentrics *j*, and working beams *i*, or their equivalents, and with the tank A, constructed and operating substantially in the manner and for the purpose shown and described.

Second, the arrangement of one more reservoirs E, containing suitable chemicals, in combination with the air pumps B and tank A, substantially as and for the purpose set forth.

No. 35,190.—CHAS. WADSWORTH, of New York, N. Y.—*Improvement in Car Ventilators.*—Patent dated May 6, 1862.—By means of bellows operated by crank shafts and connecting rods attached to the axles of the car, air is forced into the car, and is freed from dust by passing from the air-boxes through the screens of cloth or other suitable material.

Claim.—The combination of the air-filtering screen I and air-chamber *d* with the air-forcing bellows, substantially as and for the purpose shown and described.

No. 35,191.—J. B. WINCHELL, of Chicago, Ill.—*Improvement in Sewing Machines.*—Patent dated May 6, 1862.—This invention consists in so arranging a double-thread sewing machine, which employs a pointed hook or interlocking device, that it continuously sews cloth or other material without changing the direction of its feed or the character of the sewing, whether the mechanism intermediate to the driving shaft and the shaft of the lower thread-locking device is set in motion by a forward or backward revolution of the main shaft. The invention consists also in constructing a lower thread-case of nearly cylindrical form between its ends, and of rounded form at its termini, and with a movable axial pin, the said case being arranged between the two desks, one of which has a concave face, and the other a partially cylindrical concave face, so that an ordinary spool of cotton may be used instead of a bobbin, and also the loop of the needle may be carried entirely around the case in a manner to effect an interlock of the upper with the lower thread before the stitch is drawn up into the cloth with but slight friction or bind upon the loop of the upper thread.

Claim.—First, a sewing machine organization which will interlock two threads and sew continuously in the same direction without changing the direction of feed or the character of sewing, with a single pointed hook or interlocking device, substantially as described, whether the connecting mechanism intermediate between the upper needle and the hook or interlocking device is set in motion by either a back or forward revolution of the main shaft, substantially as set forth.

Second, the combination of the specified lower spool case and the specified disks between which it is arranged, and all the remaining specified operative parts of mechanism, substantially as and for the purposes set forth.

Third, the combination of the angular slotted extension of the needle arm, slotted connecting rod R, main shaft Q, rod T, segment arm O′, and pinion N, or their equivalents, substantially as and for the purposes set forth.

No. 35,192.—G. L. WITSIL, of Philadelphia, Pa.—*Improved Nutmeg Grater.*—Patent dated May 6, 1862.—This invention consists in the combination of a vertical, rotary grating-cylinder, supported within a smooth cylindrical vertical case which has one side opening into a conical, tapering chamber rigidly attached thereto, and adapted for receiving and holding securely whole or pieces of nutmeg whilst the same are being operated upon by the rotating cylinder.

Claim.—A nutmeg grater consisting of the case A, chamber A′, and cylinder B, arranged and combined together, substantially in the manner described and set forth.

No. 35,193.—J. P. WOODBURY, of West Roxbury, Mass.—*Improvement in Arming War Vessels.*—Patent dated May 6, 1862.—This invention consists in arming a vessel-of-war, having an iron-plated, convex deck, and designed to be partially submerged when in action, with guns designed to be fired under water. These guns are breech-loading, and the part which projects from the ship slides in a stuffing-box, thus enabling it to be drawn back and forward in order to be loaded. As the guns are designed to be discharged only when near the enemy's vessel, no other motion than a longitudinal one is necessary for aim. In order to prevent firing against the solid column of water which would occupy the space in the gun from the load to the muzzle, that space is filled with an air-tight case, which may be made to enclose the projection and charge.

Claim.—First, the employment of a gun or guns, constructed and operating substantially as described, in a ship so constructed and defended with armor-plates, or their equivalent, that the ship may approach an enemy with reasonable safety, substantially in the manner and for the purpose described.

Second, combining a gun, constructed and employed in a vessel as described, with an appropriate gun-carriage to support the breech; a socket and stuffing-box in the side of the hull to support the muzzle, and an external port or shutter, or other devices equivalent thereto, to enable the gun to be worked substantially as described.

Third, displacing the water from the bore of the gun between the charge and muzzle by means of air-tight displacing case, or its equivalent, substantly as described.

No. 35,194.—A. E. YOUNG, of Dorchester, Mass.—*Improved Reflecting Lantern.*—Patent dated May 6, 1862.—The claim and engraving explain the nature of this invention.

Claim.—A glass lantern body, as constructed, with a lateral neck and opening or socket, arranged relatively to its top and bottom necks and openings, and for the reception and fixation of a reflector, substantially as specified.

No. 35,195.—ERASTUS YOUNG, of Penataquit, N. Y.—*Improved Washing Machine.*—Patent dated May 6, 1862.—This invention consists in the arrangement of a hand-lever, whose fulcrum pin is adjustable in two lugs, provided with a series of holes, in combination with toggle arms and with an oscillating pressure board, in such a manner that by changing the position of the fulcrum of the hand-lever, the pressure board can be adjusted for clothes of different size and of different fabric, and thus they can be subjected to any desirable pressure.

Claim.—The arrangement of the adjustable fulcrum pin *f*, in combination with the hand-lever C, toggle arms D, pressure board B, and suds box A, all constructed and operating as and for the purpose set forth.

No. 35,196.—C. F. ALLEN, of Paw Paw, Mich., assignor to Himself and C. B. BEEBE, and H. TAYLOR, of the same place.—*Improvement in Car Bumper and Draw-head Springs.*—Patent dated May 6, 1862.—This bumper consists of a cylinder filled with pieces of India-rubber of any form, and provided with a follower or piston.

Claim.—A car bumper or draw-head spring, constructed substantially in the manner and for the purpose set forth.

No. 35,197.—VICTOR BARON, of Tabanco, St. Salvador, assignor to Himself and W. W. W. WOOD, of Philadelphia, Pa.—*Improvement in Concentrating and Cleaning Ores.*—Patent dated May 6, 1862.—The ore is fed to an inclined trough, whose concave channel gradually diminishes in depth and width towards the end, having a reciprocating motion given it, and placed within a box divided into compartments which are filled with water. The earthy and lighter portion of the ore is washed into the compartment nearest the hopper, while the heavier and richer portions of the ore pass down from the middle and deepest portion of the channel, and escape from the end of the trough to the rear compartment.

Claim.—Concentrating and cleansing ground or pulverized ore by causing it to pass along an agitated channel submerged in water, substantially as set forth.

No. 35,198.—HIRAM CARPENTER, of New York, N. Y., assignor to H. V. GAHAGAN, of the same place.—*Improvement in Construction of Railways.*—Patent dated May 6, 1862.—This invention consists in fitting the cross-ties and pedestals, together with a socket or lock joint, and in combining them with chairs that conform to the section of the rails and hold them securely without the usual taper keys or wedges. India-rubber or other elastic material is interposed between the parts in such a manner as to admit of easy access, and permit the adjustment of the track without disturbing the pedestals or ballasting of the roadway.

Claim.—The combination of the pedestals with wrought-iron cross-ties and chairs, or their equivalents, and either with or without the addition of any elastic material, substantially in the manner described and for the purpose specified.

No. 35,199.—H. B. GILL, of Ogden, N. Y., assignor to ERASTUS TURBOX, of the same place.—*Improvement in Machine for Packing Apples.*—Patent dated May 6, 1862.—This invention consists in securing to the cross-head, which forms the nut of the screw used for pressing down the heads of barrels; a pair of elastic clamps provided with hooks, which, when the clamps are put over the barrel, hook over the chime and thus form a secure and easily adjustable support for the cross-head.

Claim.—The combination of the spring hook clamps B B, with the cross-heads A, screw D, and follower E, substantially as and for the purposes specified.

No. 35,200.—C. D. INGRAHAM, of South Falls, Mass., assignor to Himself and C. A. and A. BARDWELL, of the same place.—*Improvement in Straw and Hay Cutters.*—Patent dated May 6, 1862.—By means of the arrangement of the parts named in the claim the hay or straw can be cut in pieces of greater than usual length, and the machine at the same time be self-feeding, one set of knives cutting, while the other set is feeding the straw.

Claim.—A cylinder of knives formed by having the knives arranged in sets or pairs which are shorter than the cylinder, and attached thereto in such a manner that the knives of one set or pair will be out of line with or in different planes from those of the other set or pair, and used in connexion with a cylinder E, or its equivalent, substantially as and for the purpose set forth.

No. 35,201.—JOSIAH MASON, of Birmingham, England, assignor to E. C. and J. H. PRATT, of Philadelphia, Pa.—*Improvement in Boxes, Cases, and Cards, for Pens, &c.*—Patent dated May 6, 1862.—The nature of this invention is explained by the claim.

Claim.—A box, case, or card, having a recess or recesses either permanent or formed by elastic surfaces, and having suitable fastenings for receiving and holding a sample or samples of the articles contained in the box, or in the case, or a card, for holding the articles themselves, as set forth for the purpose specified.

No. 35,202.—JOSEPH MOORE, of San Francisco, Cal., assignor to the VULCAN IRON WORKS, of the same place.—*Improvement in Ore Crushing Mills.*—Patent dated May 6, 1862.—The ore is fed to the grating where it is exposed to the action of the stamps, and after being crushed, passes through the grating to the elevator, by which it is conducted to the screen, through which latter the finer portions pass, and the coarse portions pass from the screen to a pipe by which they are conducted again to the grating.

Four iron rods are placed in each corner of the mortar bed and are strengthed by cross rods; these form the frame of the machine. Secured to the rods are guides for the stampers, and between the rods is placed a sheet-iron shrouding which boxes in the mortar bed.

Claim.—First, the combination of the stampers F, grating H, elevators V, and screen Y, arranged for joint operation as and for the purpose set forth.

Second, the construction of the frame of the machine, to wit, the rods I braced by the cross rods J, the shrouding M attached to rods I to form the mortar box, and the guides L L fitted on said rods I, as set forth.

No. 35,203.—J. S. SCHUYLER, of New York, N. Y., assignor to J. J. ECKEL, of the same place.—*Improvement in Baling Press.*—Patent dated May 6, 1862.—The object of this invention is to obtain a press of the class in which racks and pinions are employed for operating the plunger or follower, which will admit of having its plunger or follower operated by a direct application of power to the driving shaft by means of cranks, so that speed may be obtained when pressure is not required, as for instance, in moving the follower to and from its work, and also admit of having the power applied through the medium of clutches in such a manner that the two operators may work at opposite sides of the driving shaft, and one press upward while the other presses downward, in order to obtain uniform application of power.

Claim.—The two rack bars B′ B′, attached to the plunger or follower B, in combination with the gearings *a a*, E E, F F, and shaft C, all arranged and applied to the box A, to operate as and for the purpose set forth.

Also, the fast and loose ratchet collars *e g*, placed on the shaft C and the collars *g*, arranged with springs *i* and levers G, substantially as shown, when said collars are used in connexion with the gearing and rack bars described, as and for the purposes specified.

No. 35,204.—E. W. SEYMOUR, of Lisle, N. Y.—*Improvement in Method of Constructing Carriages.*—Patent dated May 6, 1862.—This invention consists in the arrangement of springs running lengthwise and fastened behind to the axle, and in front to a spring bar, and supported by a relieving bar, having a joint at each end, running parallel with the springs fastened to the centre of each spring on the under side, and attached to the axle behind. The springs are supported in front by the boot which is fastened to the spring bar, and are also connected by a joint to the under side of the seat.

Claim.—The peculiar construction and combination of springs running lengthwise, and attached behind to the axle, when connected with relieving bars behind, and both acting as relieving bars in front and operating in conjunction with each other, and from the centre each way, forming a reach and saving the springs from the tension of the draught.

No. 35,205.—W. T. ABELL, of Vernon, Iowa.—*Improvement in Machinery for Spinning Wool.*—Patent dated May 13, 1862.—This invention relates to a method of producing a draught and twist simultaneously in the same portion of the roping or yarn. The spindles are each made with a wide opening for the reception of a drum and spool which are fastened to shafts or axles passing through slots in the sides of the opening of the spindle. The spool is caused to bear on the top of the drum by means of springs attached to the sides of the spindles. The portion of the spindle above the opening is hollow for the passage of the roping from the drawing rolls to the spool upon which it is to be wound. The shaft of the drum is furnished at one end with a bevel gear *c*, and at the other end with a wheel which serves as a counter balance to the bevel gear *e* in the rotary motion of the spindle. The bevel gear e engages with a bevel gear *g*, which is fitted to turn loosely upon the spindle below the open part thereof. Attached to the upper part of the spindle is a vibrating guide consisting of a bent lever with an eye at its lower end for the purpose of guiding the yarn to the spool. The upper end of the guide is situated close under a vertically moving guide rail, against which it is pressed in contact by a spring.

Claim.—First, the arrangement within the spindle D of a spinning frame of a spool *b*, applied relatively to and operating in combination with a pair of rolls G G′, substantially as and for the purpose specified.

Second, giving motion to the so-applied spool *b* by means of a drum *a* arranged within the spindle, a gear *e* upon the said drum, and a gear *g* rotating loosely upon the spindle, substantially as specified.

Third, the employment, in combination with the spindle containing the so-applied spool *b*, of a vibrating guide L *v*, and a vertically-moving guide rail C, applied and operating together substantially as and for the purpose set forth.

No. 35,206.—H. K. AVERILL, Jr., of Decorah, Iowa.—*Improved Photographic Plate Holder.*—Patent dated May 13, 1862.—This invention consists in constructing the plate holder for supporting the sensitized glass or other plate in the camera of a single piece of porcelain or other suitable material, having on each side of its interior two or more sharp-edged projections extending from back to front, and at the back of each corner supporting points to support the back of the plate, for the purpose of preventing the collection of the sensitizing solution on the plate, and to protect the plate from stains.

Claim.—The plate holder composed of a solid frame provided with points *b b* and edges *a a*, substantially as and for the purpose specified.

No. 35,207.—H. A. BARNES, of Milwaukie, Wis.—*Improvement in Shackles for Railroad Cars.*—Patent dated May 13, 1862.—This invention consists in the addition to the shackle formed as usual, of a handle or half shackle secured thereto at right angles at its centre, for the purpose of more readily and safely handling the same.

Claim.—The employment of a handle *e* with a common shackle *c*, in combination with the drawheads *a*, substantially in the manner and for the purpose as described.

No. 35,208.—J. J. BARRETT, of Georgetown, D. C.—*Improved Refrigerator.*—Patent dated May 13, 1862.—Within the chest is placed a detached crib for holding the ice, around which is a case closed at its sides so as to admit of the circulation of air between it and the crib. Below the crib is a dripping plate provided with an opening at its centre, and having underneath a receiving vessel provided with a pipe for conveying off the water.

Claim.—The arrangement of the movable crib C and its case C′, in combination with the dripping plate E and receiving box F, substantially as described.

No. 35,209.—J. C. BIRDSELL, of West Henrietta, N. Y.—*Improvement in Threshing Clover and Hulling and Cleaning the Seed.*—Patent dated May 13, 1862.—This invention consists in the employment of a vibrating table placed under the bolts or screens for conveying the separated bolls, seed, and chaff to the hulling cylinder. Between the screens and tailing trough is arranged a spout or trough, for the purpose of catching all matter heavier than the chaff and tailings. On the top of the machine, and over the feeding rollers of the hulling cylinder, is a trough provided with a spiral conveyor which distributes the chaff and tailings from the elevator uniformly upon the feeding rollers and the hulling cylinder, by which the chaff, &c., are operated upon a second time. Fastened to the frame are standards in which a crank shaft turns and operates a rake, the teeth of which work between the teeth of a comb on the upper screen, for the purpose of picking the threshed clover to pieces when it is green or moist, and shaking out the bolls, seed, and chaff.

Claim.—In combination with the hulling cylinder, the vibrating or traversing table L under the bolts or screens for conveying the bolls, seed, and chaff separated from the straw to the hulling cylinder; substantially as described.

Also, the spout, or trough T, between the screens and tailing trough, for the purpose specified.

Also, the spiral conveyor W′, in combination with the hulling cylinder, for distributing the tailings from the elevator uniformly to the feed rollers and hulling cylinder.

Also, hanging the bolts or screens H′ H″ on swinging arms and springs, when the bars or arms I I are hung in the centre so as to move the screens in opposite directions by the same crank and link.

Also, in combination with the hulling cylinder, the feeding rollers P P, for the purpose specified, substantially as described.

Also, one or more rakes N′ in combination with the comb or combs on the bolt or screen, for the purpose specified.

No. 35,210.—MARTIN BISHOP, of Washington, D. C.—*Improved Combination of Fuel Box and Washing Apparatus with Settees.*—Patent dated May 13, 1862.—This invention consists in constructing a settee with a front part, bottom, and sides, and dividing it into different compartments so as to form a combined settee, fuel repository, and washstand.

Claim.—As a new article of manufacture, a combined settee, fuel repository, and washstand, constructed and arranged as drawn and described.

No. 35,211.—J. H. BLOODGOOD, of New York, N. Y.—*Improvement in Machinery for Drawing and Spinning Wool.*—Patent dated May 13, 1862.—This invention relates to the use of front drawing rolls having an intermitting action for the purpose of allowing the twist to run back from the spindles to the delivery rolls, and it consists of an apparatus composed principally of two surfaces, between which the yarn passes, and one of which moves toward and from the other to seize the roving or yarn before each intermission in the action of the drawing rolls takes place, and liberate it immediately after the resumption of the action of the rolls.

Claim.—The employment in drawing and spinning frames, in combination with drawing rolls, having an intermitting action of an apparatus consisting of two surfaces, of which one has a movement toward and from the other, and which operate substantially like the surfaces of *d* and *e*, for the purpose specified.

No. 35,212.—CLAUDE BRISON, of Chalons sur Saone, France.—*Improvement in Furnaces of Retorts, Stills, &c.*—Patent dated May 13, 1862.—This invention consists in providing the ovens, kilns, or furnaces, either conjointly or not, with the ordinary horizontal retorts used in the manufacture of illuminating gas or other similar operations, with one or more vertical retorts of a cylindrical or other suitable shape open at the top and bottom, the said openings to be hermetically closed at pleasure, the top one by a lid and the bottom one by a corresponding "obturator," or movable bottom, jointed at one end of a counterpoise lever turning in suitable brackets, so as to admit of the lower opening being closed when the retort is to be filled, or opened when the same is to be emptied.

Claim.—Providing ovens, kilns, or furnaces, in which retorts are or may be made use of for various manufacturing or other purposes, with vertical retorts, each having a suitable lid

and a movable bottom or obturator, the latter jointed to a lever for allowing to open or shut at pleasure the lower opening of the retort, substantially as described and for the purposes specified.

No. 35,213.—S. H. BROWN, of Troy, N. Y.—*Improved Hydrant.*—Patent dated May 13, 1862.—Connected with the supply pipe is an upper valve box, in which is arranged a puppet valve, and within a lower valve box is arranged a slide valve having upon its front face a groove corresponding with a post in the discharge pipe. The sliding valve is operated by means of its stem projecting through a slot in a cap of the lower valve box and through a hole in the lower end of the valve rod, by means of which, stuffing boxes may be dispensed with. The grooves in the front face of the sliding valve admit of the waste water in the discharge pipe, which is above ground and subject to the frost, passing off freely. The valves are operated by means of a double-armed lever working in inclined slots or planes formed between sections of the cap so as to secure a regular and gradual action of the valves and prevent reaction and bursting of the pipes.

Claim.—First, the valve *a*, in combination with the sliding valve D, when constructed and arranged so as to operate, substantially as described.

Second, the sliding valve D, with its adjuncts K E and *i*, whereby it and the valve *a* may be operated without the use of stuffing boxes, substantially as described.

Third, the grooves in the face of the sliding valve D, whereby the waste water in the discharge pipe is allowed to pass off, for the purpose and substantially as above set forth.

Fourth, the inclined planes *n* and *o*, in combination with the double-armed lever M, as and for the purposes described.

No. 35,214.—CHARLES CAMPBELL, of Yellow Head, Ill.—*Improved Machine for Breaking Broom Corn.*—Patent dated May 13, 1862.—This invention consists in the employment of revolving beaters, stationary adjustable break irons or bars, and a guard shield for the beaters, so arranged as to break the standing stalks as the machine is drawn between the rows preparatory to the harvesting thereof.

Claim.—First, the revolving beaters H and stationary bars or break iron I, placed on a mounted frame A, and arranged to operate as and for the purpose shown and described.

Second, the combination of the revolving beaters H, bars, or break iron I, and guard or shield K, all arranged or placed on a mounted frame A, for joint operation as and for the purpose set forth.

No. 35,215.—W. J. CANTELO, of Philadelphia, Pa.—*Improvement in the Application of the Hibiscus Moscheutos to the Manufacture of Paper and Other Purposes.*—Patent dated May 13, 1862.—The nature of this invention is explained by the claim.

Claim.—The application of the fibres of the American plant known as the "Hibiscus Moscheutos," or "Hibiscus Palustris" to the manufacture of paper, cordage, textile fabrics, &c., as set forth.

No. 35,216.—JOHN CARTON, of Utica, N. Y.—*Improvement in Heaters.*—Patent dated May 13, 1862.—The fire pot is formed in two nearly equal parts or sections so as to obviate its liability to break by expansion or contraction during the process of heating and cooling.

Claim.—The fire pot, composed of the sections B and C, constructed and operating substantially as described.

No. 35,217.—C. C. COLEMAN, of Worcester, Mass.—*Improvement in Breech-loading Fire-arms.*—Patent dated May 13, 1862.—To the lower rear corner of the breech is pivoted the rear end of the trigger guard lever, furnished above the pivot with a bolt working in the arc of a circle, and entering a hole in the part of the breech frame behind a slot in the rear of the barrel, by means of which the breech is locked as soon as closed.

Claim.—The breech C swinging on a pin *b* at the bottom of its front end, and having attached to the bottom of its rear end by a pin *c* a trigger guard lever D, constructed with a bolt *d* to lock into the frame A and secure the breech in a closed condition, the whole operating substantially as specified.

No. 35,218.—CICERO COMSTOCK, of Milwaukie, Wis.—*Improvement in Rotary Ploughs.*—Patent dated May 13, 1862.—The wheels to which the shafts of the teeth are connected carry with them in their rotation the main axle, which has its bearings in cams attached to the frame of the machine. The shafts which carry the teeth or spades are hung inside the periphery of the wheels, so as to prevent their coming in contact with the ground, and are alternately actuated by the cams, the shaft having the handle *g* pivoted to the inner side of the wheel being acted upon by the cam on one side, and the shaft having the handle *h* on the outside of the wheel being acted upon by the cam on the other side. The shaft having the handle *g* plays in a slot in the wheel, and has on its end a friction roller which traverses the groove of its cam, while the shaft having the handle *h* plays through a hole in the wheel, and its handle has a friction roller which traverses the groove of its cam.

Claim.—First, having the spade or fork shafts inside of the periphery of the wheel, as set forth.

Second, connecting the tooth or spade to the shaft forward of the shaft, as recited.

Third, the introduction of India-rubber between the box or cap of the tooth and the shaft, to give elasticity and protection to the tooth and shaft, as described.

Fourth, the hinge sections of the cams for allowing of the folding up of the forks or spades.

Fifth, hanging the spades or forks' shaft to the wheels or arms by the handles, as described.

Sixth, providing that part of the cam which receives the pressure of the spade or forks' shaft with the spring or elastic bearing.

No. 35,219.—A. B. COOLEY, of Philadelphia, Pa.—*Improvement in Adjustable and Reversible Propellers.*—Patent dated May 13, 1862.—This invention consists in so constructing the propeller, in connexion with arms and links and a sliding ring operated by a lever, that the direction of the blades may be instantly reversed, so as to convert the propeller from a right-handed to a left-handed screw, thereby effecting a change in the direction of the vessel without changing the continuous rotation of the propeller shaft.

Claim.—The blades H and H′, arms G and G′, links E and E′, the sliding ring F and ring J, when the whole of the above parts are arranged on the hollow hub or casing D for joint action, as set forth, and when the said ring J is operated by the links M and M′ and lever N, or their equivalents, as specified.

No. 35,220.—JOHN DANNER, of Canton, Ohio.—*Improved Washing Machine.*—Patent dated May 13, 1862.—The interior of the box is provided with a circular rubbing apparatus formed by slats secured to the end pieces. Within the slatted cylinder is hung a grooved or slatted rubber oblong in section, the shaft passing through near one edge in order to give it an eccentric motion, which prevents its liability to clog as the clothes are operated upon.

Claim.—The combination of the inner oblong hinged rubber M with the slatted revolving cylinder, substantially as set forth.

No. 35,221.—J. T. DAVY, of Troy, N. Y.—*Improvement in Stoves.*—Patent dated May 13, 1862.—Above the top of the coal pot and below the door is arranged a plate extending from the casing inwardly and downward over the descending flue, and within the rim of the coal pot, so as to cut off the direct downward draught from the combustion chamber and the descending flue. Across the gas passage leading to the direct draught, and between the coal pot and the combustion chamber, is arranged a movable perforated plate for the purpose of intercepting and reflecting a portion of the heat and gases back upon the coal. The upper part of the coal pot forms an air-heating chamber communicating with the atmosphere by any suitable air passage, and also with the descending flue by a series of small holes in its outer side, for the purpose of supplying heated atmospheric air to promote combustion within the descending flue.

Claim.—First, the particular arrangement of the deflecting plate I, in combination with the coal pot A, reverting chamber F, and radiating flue C, in communication with the draught pipe D, as and for the purposes shown and specified.

Second, the arrangement of the movable perforated plate O across the gas passage *k*, between the coal pot A and reverting chamber F, in combination with the lateral gas passage *j*, below the chamber F and the radiating flue C, communicating with the exit pipe D, as and for the purpose described.

Third, the arrangement of the series of small apertures *t*, or their equivalent, in the outer side of the chamber P communicating with the open air, and forming the top or rim of the coal pot A in combination with the expansion chamber F, lateral gas passage *j*, and radiating flue C, communicating with the draught pipe of the stove, as and for the purpose set forth.

No. 35,222.—L. P. DODGE, of Newburg, N. Y. *Improvement in Pumps.*—Patent dated May 13, 1862.—This invention consists in arranging the ball valves in valve chambers divided by a partition in the lower portion of the air chamber, extending from which to each end of the barrel of the pump, are two discharge passages provided with a valve seat in the same plane with the top of the barrel. This construction is designed to avoid making more than one joint, and that a small and easily adjusted one.

Claim.—First, the arrangement of the valves M N in the valve chambers K L in the base of the air vessel H, and arranging the seats *f g* near the joint between the parts, so that there is but a single joint of small area connecting the passages F G with the air chamber, all as set forth and for the purpose specified.

Second, in combination with the foregoing, arranging the joint connecting the air chamber and the cylinder casting in the same plane, so that both may be finished at one operation, as set forth.

No. 35,223.—J. K. DUGDALE, of Richmond, Ind. *Improvement in Cultivators.*—Patent dated May 13, 1862.—This invention consists in the employment of two or more vertically sliding frames provided with cultivator teeth, knives or drill teeth, &c., and attached to the front part of a frame mounted on a wheel or wheels. The sliding frames are raised and lowered to adjust the cultivator, &c., to the proper depth by means of a pinion wheel working in a rack on the frame, and connected by a rod to a perforated plate attached to the rear end

of the frame. The rod is held in position by means of a pin passing into the holes of the plate and secured by a spring.

Claim.—The arrangement and combination of the adjusting apparatus composed of the perforated plate G, pin and spring I, rod F, with pinion E, working in rack *e*, substantially as described and for the purposes set forth.

Also, the combination of the device or guides D′ with the frames B and C, as and for the purpose set forth.

No. 35,224.—A. S. FISHER, of Millville, N. Y.—*Improvement in Weather Strips.*—Patent dated May 13, 1862.—Within a groove in the lower edge of the door is a metal box, in which is fitted a square metallic bar, which is allowed to play freely through a hole in one end of it, and so arranged, in connexion with arms and a rubber strip, that, as the door closes, the projecting end of the bar enters a recess formed in the jamb of the door frame and is gradually forced inward, while the India-rubber strip is at the same time forced down closely upon the door sill. A spiral spring operates to draw up the strip when the door is opened.

Claim.—The arrangement of the horizontal spring *f* and the arms *h i* with the bar E, strip F, and jambs B B′, as and for the purpose shown and described.

No. 35,225.—PAUL FLECHET, of Paris, France.—*Improvement in Sun Dials.*—Patent dated May 13, 1862.—This invention is designed to indicate the hour in true and near time without the aid of a table of corrections, and also the meridian as well as the latitude of the spot where it is used, being self-verifying. A reference to the specification and drawing will be necessary for an understanding of its construction and operation.

Claim.—The improvements in solar time-keepers or chronometers, substantially as described.

No. 35,226.—H. A. FOWLER, of Afton, N. Y.—*Improvement in Instrument for Draughting Ladies' Dresses.*—Patent dated May 13, 1862.—This invention consists in the employment of strips of metal, or other suitable material, provided with slides and figures for the purpose of taking measures for cutting out or draughting ladies' dresses.

Claim.—First, connecting the chest rule *f*, shoulder rule *d*, arm rule *c*, neck rule *a*, and shoulder piece *b*, for draughting the front, as described.

Second, the adjustable dart attached to the chest rule *f* by the slide *g*.

Third, connecting the form *j* with the chest rule *k*, arm rule *l*, and shoulder rule *m*, substantially in the manner set forth and described.

No. 35,227.—J. S. FOWLER, of Peoria, Ill.—*Improvement in Corn Shellers.*—Patent dated May 13, 1862.—This invention consists in the employment of a toothed cylinder, below which is placed an elastic or yielding cylinder in connexion with an endless discharging apron and a shoe, provided with a screen or screens. By means of a horizontal conveying screw and an elevating screw, the corn and cobs are carried upwards, the corn being discharged from the ends of the trough, while the cobs are carried off by the endless apron.

Claim.—First, the toothed cylinder C, in combination with the jointed and yielding slotted or grated concave E, screen or screens G, with a shake motion given it as described, and the endless discharging apron K, all arranged for joint operation as and for the purpose set forth.

Second, the combination of the screws or spiral conveyors T Y with the cylinder C, concave E, screen or screens G, fan N, and discharging apron K, and feeding apron A′, all arranged as and for the purpose set forth.

No. 35,228.—EDWARD FROST, of Georgetown, D. C.—*Improvement in Car Trucks.*—Patent dated May 13, 1862.—The nature of this invention is explained by the claim.

Claim.—First, the constructing the axle boxes within the jaws of the slide pedestals C, or any arrangement of the axle ends equivalent thereto, so as to permit a limited play transverse of the axle to the axle ends, in combination with the use of fixed wheels of conical tread D.

Second, the arrangement of placing the pedestals E E and journal boxes F F at the centres of the axles, for the purpose of propelling the rolling parts by traction applied at or near their centres of gravity.

No. 35,229.—J. C. & A. P. GARRETSON, of Jackson, Iowa.—*Improvement in Looms.*—Patent dated May 13, 1862.—The shedders are contained in an oblong square box secured to the centre of cross pieces of the framing, the box being provided with a movable bottom upon which the shedders rest, and a spiral spring underneath. As the driving wheels revolve, the lathe is operated by connecting rods, and the shedding bar is pressed through the shedders, when the bevel point comes in contact with the shedder No. 1, which is elevated, and shedders Nos. 2, 3, and 4 are depressed, which makes one shed. The incline on the shedding bar having come in contact with the right hand upright of the sliding frame, the latter is moved to the right hand over one tooth of the rack bar, which holds the frame securely to that point.

Claim.—First, the oblong box, combined with its movable bottom, to hold the shedders, and in which they operate, constructed substantially as described and for the purposes set forth.

Second, the shedders, attached to their harness frames, combined with the shedding bar to produce a shed in the web, the same being constructed and operating substantially as described and set forth.

Third, combining the sliding frame with the rack and dog to vary the shed in the web, operating substantially as described and set forth.

No. 35,230.—WILLIAM GIBSON, of Fort Wayne, Ind.—*Improvement in Fences.*—Patent dated May 13, 1862.—This invention consists in arranging the uprights on the ends of the panels of the fence, in connexion with the longitudinal rails, so as to project beyond the ends of the rails, which are secured to them, and so as to catch over the ends of the rails of the adjoining panel, leaving a space between the ends of the rails, so that the fence will adjust itself to uneven ground. Gibs and keys are passed through mortises in the uprights and between the ends of the rails, so as to firmly secure the panels and not interfere with the adjustment of the fence to the uneven surface. The upper ends of the braces and lower edges of the upper rails are provided with notches for holding the parts together without nails.

Claim.—First, the space *a* formed between the ends of the rails B B′, and between the uprights A A′, in the manner and for the purpose shown and described.

Second, the employment of gibs *b* and keys *c*, in combination with the uprights A A′ A* A′*, and passing through the spaces *a* between the ends of the longitudinal rails, as and for the purpose set forth.

Third, the arrangement of the notches *e* and *g* in the braces D, in combination with the notches *f* in the lower edges of the upper rails, and with the upper edges of the lower rails, all constructed and operating as and for the purpose specified.

No. 35,231.—CHARLES GOODYEAR, Jr., of New York, N. Y.—*Improvement in the Manufacture of Casters from Vulcanizable Compounds.*—Patent dated May 13, 1862.—This invention is explained by the claim.

Claim.—First, the manufacture of wheels or rollers of a fibrous compound of vulcanized India-rubber or other vulcanizable material, substantially as described.

Second, the manufacture of wheels or rollers of vulcanized India-rubber or other vulcanizable material, by forming and vulcanizing the same in moulds, substantially as described.

No. 35,232.—J. W. GRIFFITHS, of Philadelphia, Pa.—*Improvement in Navigable Vessels.*—Patent dated May 13, 1862.—This invention relates to a change of form of the transverse section of the midship bodies of vessels, and it consists in compensating for the loss of buoyancy at the bilge, consequent upon its rotundity, by commencing the bilge lower down the sides, and extending below the usual base line to any point not below the bottom of the keel, but below a horizontal line with the top of the keel.

Claim.—The construction of navigable vessels with a drop or downward extension of the bilge below a straight base line, at the midship cross sections, substantially as shown and described, so as to compensate for the loss of buoyancy consequent upon the rotundity of the bilge, all as set forth.

No. 35,233.—BENJAMIN HARNISH, (miller,) of Pequea, Pa.—*Improvement in Water Wheels.*—Patent dated May 13, 1862.—The casing is formed of three sections, the upper one of which has perpendicular sides, and a flange or rim parallel with the top, and constituting a circular box for the wings of the bucket. Below the upper section is an inverted conical section, to which, as also to the lower section, the spiral descending wings of the buckets are closely adapted, forming spiral chutes between the buckets on the vertical cylinder. On the top of the casing, and forming a part of it, is an open cylinder of sufficient height to prevent the water within the penstock from entering through it into the casing. Extending downwards and inwards, half way the depth of the buckets, are check plates or partitions, so as to prevent the water from striking the cylinder above, and cause a vortex by the atmospheric pressure through the upper open cylinder to be exerted on the outer edge of the spiral buckets.

Claim.—The composite casing F G H, with its open cylinder E, in combination with and closely adapted to the buckets N, with their outer flange or square terminus M, and parabolic spiral chutes O, and the position and attachment of the check plates P between them, all combined and arranged substantially in the manner and for the purpose specified.

No. 35,234.—D. M. HARRIS and S. S. BURNET, of Salem, Mass.—*Improved Clothes Wringer.*—Patent dated May 13, 1862.—Each end of the shaft of the upper roll is clasped by a strap which is bent in the form shown in the engraving. The strap is then connected at its bent portion with a clutch by means of a rod having a screw at its lower end, to which is fitted a thumb nut, which, in connexion with a spring, serves to secure the device to the tub, and give the rolls any required pressure.

Claim.—The combination and arrangement in a clothes wringer of the strap *e* attached to the ends of the shaft of roll *c′*, working in the slotted boxes *o′ o′* the rod *h*, the thumb nut *i*, rubber spring *j*, and clutch *g*, operating together in the manner described for the purpose specified.

No. 35,235.—SIMON HEITER, of Philadelphia, Pa.—*Improvement in Tents.*—Patent dated May 13, 1862.—The nature of this invention is explained by the claim.

Claim.—A tent having expanding and contracting ribs like an umbrella frame, to which are permanently attached the canvas top and sides, the whole being constructed and operating substantially in the manner set forth.

No. 35,236.—WILLIAM HOPPER, of Onion Grove, Iowa.—*Improvement in Wind Wheels.*—Patent dated May 13, 1862.—This invention consists in the arrangement of a longitudinally sliding rotary rod connecting with a cross-head, to which motion is imparted either by hand or by the action of a wind board and by an endless chain, in combination with ropes or lines leading from the outer end of the said sliding rod to the sails, in such a manner that by imparting to the rod a longitudinally sliding motion, the sails are either drawn in or drawn out, as the case may be, and that by combining the wind board with the said rod the speed of the wind wheel is regulated by the force of the wind.

Claim.—The arrangement of the longitudinally sliding rotary rod G and rotary ropes *p*, connecting with the sails F, in the manner described, in combination with the cross-head H, pivoted stirrup J, ropes or chains *c'*, and wind board K, all constructed and operating substantially as and for the purpose set forth

No. 35,237.—S. B. HUNT, of New York, N. Y.—*Improved Automatic Boiler Feeder.*—Patent dated May 13, 1862.—Upon the top of the front end of the boiler is placed a water tank or receiver for containing the supply of water to be fed to the boiler. To a dome in the top of this tank is connected a steam pipe leading from the steam chamber of the boiler at the height of the proper water surface. To the bottom of the tank or receiver is attached a pipe provided with a check valve, and connected to the lower end of one of the legs of the boiler, so that as the water becomes lessened in the boiler, an additional supply is constantly and regularly supplied by means of the pressure of the steam admitted into the tank from the boiler when the water falls below its proper height.

Claim.—Automatically supplying a steam boiler with a regular proper supply of feed-water by the combination of the tank B, sham pipe D, and feed pipe F, arranged and operating as set forth.

No. 35,238.—ALFRED INGALLS, of Independence, Iowa.—*Improved Evaporator for Saccharine Juices.*—Patent dated May 13, 1862.—This invention consists in the arrangement of three pans placed at different levels on the same furnace, in combination with three dampers and two fire doors, in such a manner that the heat under each of the pans may be regulated at pleasure, and that each pan can be emptied whenever desired without interrupting the operations of the others. Upon the edges of the first two pans are seats or recesses, in which is fitted a movable skimming device, so that the scum as it rises on the surface of the juice can be readily removed.

Claim.—First, the arrangement of three pans A B C, placed at different levels on the furnace D, in combination with the dampers F G H, and fire doors *d e*, constructed and operating as and for the purpose shown and described.

Second, the arrangement of the skimming device I, in combination with seats *m n m' n'*, on the edges of the pans A B C, constructed and operating substantially as and for the purpose set forth.

No. 35,239.—T. T. JACOBS, of Mount Carroll, Iowa.—*Improved Mode of Securing Chimneys to Lamps.*—Patent dated May 13, 1862.—This invention consists in providing the upper part of a lamp top with two clasps held and pressed on the chimney by a spring, which is operated by pressing the flat projections of the clasps together where the spring is situated, for the purpose of raising the chimney when fitted on or taken off the lamp top.

Claim.—The combination of the two clasps A A, each having two projecting lips or catches *c c*, with the spring D, constructed, operated, and applied, substantially as and for the purpose specified.

No. 35,240.—DAVID KEYSER, of Philadelphia, Pa.—*Improved Boot Blacking Stand.*—Patent dated May 13, 1862.—This invention consists of a stand composed of a box containing a drawer, and provided with a lid, to which is secured a block formed similarly to the sole of a shoe, for the purpose of containing the implements used in cleaning boots and shoes, and forming a rest for the same during the operation of cleaning.

Claim.—As a new manufacture the box A, drawer D, lid B, and block E, when combined and arranged as set forth, for the purpose specified.

No. 35,241.—WILLIAM JOHNSTON, of Cincinnati, Ohio.—*Improvement in Breech-loading Fire-arms.*—Patent dated May 13, 1862.—The axle upon which the double cylinder or sleeve turns, whereby the barrel is coupled to the breech, is made of conical or tapering form, so that when it becomes loosened by use, it may readily be tightened by means of a screw and nut at the end. The "beak" of the cock passes through a small slot in the breech piece where it strikes the cartridge and recoils again to a distance sufficient to secure it from being

broken or damaged, and prevent the cartridge or end of the barrel or coupling cylinder from being accidentally marred in turning off the barrel.

Claim.—First, the axle C, constructed of a conical or tapering form, when used in the manner and for the purpose described.

Second, the causing of the cock G to recoil at each discharge by the use of a spring *i* and a stop *c*, or their equivalents, substantially in the manner and for the purpose described.

Third, in breech-loading guns, so arranged as to be loaded by the insertion of a cartridge from the rear, the construction of the chamber which is to receive the cartridge in the form of the frustum of a cone, having the base of the cone at the lower rear end of the chamber, when that chamber is so arranged that access may be readily had thereto, for the purpose of removing with the thumb and finger the shell of a metallic cartridge after each discharge, substantially in the manner and for the purpose specified.

No. 35,242.—ISAAC KNAPP, of Medina, N. Y.—*Improvement in Stop Dams for Canals.*—Patent dated May 13, 1862.—This invention consists in the employment of a framework which may readily be placed across a canal or other artificial water-course, and having its outer sides covered with a plank from the top to near its bottom, leaving a space to be closed by gates which may be raised and lowered by means of screws, so that the flow of water may be stopped, or its depth regulated.

Claim.—The structure described, and the mode or manner of using the same, as explained.

No. 35,243.—HENRY KNIGHT, of Jersey City, N. J.—*Improvement in Moulds for Cement Pipes.*—Patent dated May 13, 1862.—This invention consists in the employment of a sectional mould which admits of being opened and closed, and having its lower end enlarged and provided with a shoulder, in combination with a central core, having a right-angled continuous enlargement or shoulder at its base, whereby hydraulic cement pipe with an external projecting collar and an internal right-angled socket at one end may be moulded vertically without the necessity of slipping the core down through the bed plate in order to remove the mould and pipe from the machine; and whereby, also, the necessity of finishing the upper end of the cement pipe at the upper end of the core bar, by means of an annular detachable collar, is obviated.

Claim.—The combination of the divided core D D', slots *i i*, guide pins *h h*, and perforated platform B, substantially in the manner described.

Second, the construction of the base plate E E' in such a manner that it constitutes, when in use, the collar of the core bar and also the bottom of the mould, and serves as a support to the outer or lower end of the pipe, and also the shoulder of the socket when the mould and pipe are being lifted over the core, substantially as described.

Third, the construction of a vertical mould, divided longitudinally in two parts, in combination with the base plate, so arranged that it shall support and hold the two parts of the mould firmly closed, while the said mould and the enclosed pipe are being raised over the core bar, substantially as described.

No. 35,244.—ALEXANDER MCNAIR, of Newark, N. J.—*Improvement in Running Gear of Cars for Street Railways.*—Patent dated May 13, 1862.—The rails upon which the cars run are constructed with flat bearing surfaces, having a longitudinal groove in the centre. The main wheels of the car are without flanges. To the forward truck is rigidly attached the housings of the axle boxes of an extra pair of wheels in front, provided with a central flange and acting as guide-wheels to keep the car upon the track. By means of an upright screwed rod passing through a sleeve and secured to the axle of the guide-wheels, the latter may be raised from the track, and the car be allowed to run off the track when necessary in case of obstructions or otherwise.

Claim.—The combination with the axle H and floor frame C of the projected pivoted truck I, flanged wheels K K, axle L, standard *e*, and adjusting screw rod C, in the manner and for the purpose shown and described.

No. 35,245.—B. MELLINGER, S. MELLINGER, Jr., and J. MELLINGER, of Mount Pleasant, Pa.—*Improvement in Horse Rakes.*—Patent dated May 13, 1862.—The thills are attached at their rear ends to the axle and rake heads by means of joints secured to the upper edge of the back part of the axle. The whiffletree is attached to a segment clevis on the axle and rake head by means of a stay rod and connecting rod. When the machine is in operation the weight of the driver tends to keep it in proper working position; and when the teeth have gathered a proper amount of hay, the operator pushes forward a lever which causes the axle to turn and elevate the teeth, in which position also the machine is kept by the weight of the driver as long as necessary, or until an opposite movement of the lever changes the position.

Claim.—Attaching the thills C' C' to the axle and rake head A, by joints *c c*, at the back part of the axle and rake head, in combination with the whiffletree I, attached to a segment clevis L on the axle and rake head A, by means of a stay rod K and rod J, all arranged and operating as and for the purpose specified.

No. 35,246.—Cancelled.

No. 35,247.—RICHARD MONTGOMERY, of New York, N. Y.—*Improvement in Apparatus for Using Submarine Guns.*—Patent dated May 13, 1862.—This invention consists in the arrangement of a telescopic or adjustable sliding tube attached to and penetrating the side of a vessel at a point below the surface of the water, so that a shot or shell may be discharged through it from a cannon within the vessel. Water is prevented from entering the sliding tube by the insertion of a plug of any suitable material, which is blown out as the piece is discharged.

Claim.—A cylinder or tube, extensible telescopically or by analogous means, to be kept free from water by means of a plug or analogous device, as conducting pipe for the transmission of shot or shell under water.

No. 35,248.—WILLIAM MURDOCK, of Jersey City, N. J.—*Improvement in Moulds for Castings.*—Patent dated May 13, 1862.—This invention consists of a cast-iron mould made in two parts, at the centre of which is a space of the size and form of the casting to be made. An opening or gate is made from the outside to the central space, around which and the central space of each mould is a raised edge for the purpose of preventing the moulds, when expanded by heat, from opening next to the casting or central space. The moulds are hung horizontally in a frame, and to one of the sections of the mould is connected a screw, by means of which it may be moved to or from the other section so that the casting can be readily discharged from the mould when desired.

Claim.—First, the screw C′, in combination with the movable section or half mould C and the pins and holes G, as and for the purpose specified.

Second, the arrangement of the elevated or raised edges *e* around the form of casting *b* and gate *a* upon the metallic moulds, as and for the purpose set forth.

No. 35,249.—L. E. OSBORN, of New Haven, Conn.—*Improved Machine for Folding Paper.*—Patent dated May 13, 1862.—This invention consists in the employment of one or more pairs of rollers provided with fingers or nippers and conveying tapes in connexion with adjustable holding tapes, and one or more feeders fitted in the fly and in a feeding frame, so arranged as to be applied directly to a printing press and operated therewith, receiving the printed sheets from the press and discharging them in a folded state, the sheets being folded one or more times, as may be desired.

Claim.—First, the employment or use of a fly B, provided with a bar or feeder H, operated automatically through the medium of the frame G and fly B in combination with the rollers J J′, feeding frame A, and rollers Y Y, all arranged for joint operation as and for the purpose set forth.

Second, the automatically adjustable tapes *n n* when used in connexion with the sheet-conveying tapes *m*, and operated substantially as and for the purpose set forth.

Third, operating the fingers Q Q of the rollers J J′ through the medium of the springs *q* on the shafts R R, the projections *r* on said shafts, the catches *t* on the levers T, and the lever W, actuated as shown, to operate on levers T; and these parts applied to all the fingers of any number of pairs of folding rollers that may be employed in the machine.

No. 35,250.—W. K. OSBORN, of Chester, N. J.—*Improvement in Straw Carriers and Grain Separators.*—Patent dated May 13, 1862.—This invention consists in combining together a series of rakers and separators with curved and straight teeth arranged upon alternately moving crank shafts in such a manner that, while half of the rakes are holding the straw down upon the shaker, the other half are pulling it up and separating it so as to free the grain. Below the separator is suspended a perforated shaker, to which a shake motion is imparted by means of connexions with the separator.

Claim.—The separate rake heads L, when provided with straight and curved teeth, as described, and when combined with crank shafts so arranged as to impart to them an alternate up-and-down motion, substantially as and for the purpose specified.

Also, in combination with the above, the shaker D, when arranged for joint action with the rakes, in the manner substantially as set forth.

Also, the curved teeth *f*′, when made adjustable, in the manner and for the purpose described.

No. 35,251.—ALPHONSE OUDRY, of Paris, France.—*Improvement in Bridges.*—Patent dated May 13, 1862.—This invention consists in the method of constructing suspension bridges so that, as one portion of the platform or roadway is subjected to a greater burden than other portions, it does not become distorted or put out of shape, and the structure is rendered less liable to oscillate. The means of suspension consists of two parabolic chains or cables, both in the same plane of suspension, meeting in the middle and uniting into one at the pillars, leaving between them spaces large enough to comprise all variations of curves that each single chain would take if unduly loaded at any one part of the platform. These spaces are filled up by connecting rods, which maintain the chains in their relative position, and by the introduction of other diagonal rods, the surplus strain on either cable will be communicated to the other, by which means the strain will be equalized.

Claim.—First, the employment of double parabolic cables or chains, as described and shown.

Second, the employment of two series of rods set obliquely to the plane of the platform, substantially as described and shown.

Third, the employment of rigid tie pieces to overcome the effect of a horizontal force acting laterally upon four double chains or systems of suspension which would otherwise tend to deform, distort, or alter therefrom, together with the means described to replace such tie pieces in the middle of a bridge or viaduct so as not to impede the circulation, all as described and illustrated.

No. 35,252.—AARON PALMER, of Brockport, N. Y.—*Improvement in Sewing Machines.*—Patent dated May 13, 1862.—Over one of the four shafts to which the cogs are attached passes a transverse shaft, to which is attached a lever by which the shaft is turned. Upon this transverse shaft is also placed an adjustable needle holder of any convenient size or form, held in place by a screw, and capable of being moved backward or forward on the shaft to accommodate needles of different lengths. The cloth is entered between the crimping wheels, whence it is thrown upon the needle and the stitches formed. When the needle is full, a movement of the lever presses the needle holder away from the needle, and at the same time presses the wheels upon the needle so that the cloth can be instantly pulled off. The lever being reversed, the needle holder resumes its place and the work proceeds.

Claim.—The combination of the crimping wheels L and M with the adjustable needle holder z and transverse shaft U, substantially as described and for the purposes set forth.

No. 35,253.—ALMARIN B. PAUL, of Silver City, Nevada Territory.—*Improved Amalgamator and Ore Mill.*—Patent dated May 13, 1862.—The construction of this device will be understood by reference to the claim and engraving. It is designed to be used in connexion with an ordinary amalgamating pan into which the pulp flows or is forced.

Claim.—A rotating muller for amalgamating pans formed of a series of curved flat arms, B B B B′, provided with slots *a*, and having curved grooves *a*″ in their under surfaces or face sides; said arms being attached to an annular hub A, which also has radial arms C connected to it provided with pins *f f*′, and adjustable upright copper plates D, substantially as described.

No. 35,254.—SAMUEL PEBERDY, of Philadelphia, Pa.—*Improvement in Knitting Machine Needles.*—Patent dated May 13, 1862.—This invention consists in combining with a barbed needle of a knitting machine a notched shield or guard so constructed that the said needle may form what is known as "ribs" on the knitted fabrics, the object being to dispense with the cumbrous and complex mechanism heretofore used in knitting machines for effecting the same purpose.

Claim.—Combining with a barbed knitting needle the shield or guard *d*, constructed in the manner described, or any equivalent to the same, so as to guide and retain the thread in the manner specified.

No. 35,255.—N. C. PERRY, of Chester, Conn.—*Improvement in Machine for Bending Wire.*—Patent dated May 13, 1862.—Upon the top of a cylindrical iron pillar is a wheel which carries a disk constituting a pivot, near the edge of which is placed an eccentric post, around which the wire is bent. Upon the top of the handle is secured a guide having a wedge-formed end extending nearly to the eccentric post, and provided with a notch for holding the wire in position. A clamp extends down at the side of the pillar, so arranged that its upper end may be moved forward or backward through a mortice in the upper wheel.

Claim.—First, the use of the eccentric post H, in the manner and for the purpose set forth and described.

Second, the guide I and the clamp B, in combination with the eccentric post H, operated in the manner set forth and described.

No. 35,256.—JOHN PFAFF, of Philadelphia, Pa.—*Improvement in Tail Pieces for Violins.*—Patent dated May 13, 1862.—This invention consists in combining with the tail piece of a violin a tongue of thin metal so arranged that by applying the mouth to the stem of the tail piece and blowing against the tongue the vibration of the latter will give out a note for guiding the performer in tuning his instrument.

Claim.—Combining the tongue *g* with the tail piece of a violin, substantially as and for the purpose set forth.

No. 35,257.—C. B. PORTER, of Ann Arbor, Mich.—*Improvement in Apparatus for Inhaling Chloroform.*—Patent dated May 13, 1862.—This invention consists in the combination of a reservoir, air-chamber, air-regulator, screen, valve, tube, and mouth-piece, in such a manner that the agent to be administered, after being placed in the reservoir, may pass through the bottom, by means of a valve, in greater or less quantities, at the will of the operator. After passing through the valve, it falls in drops upon a screen stretched across the centre of a chamber, into the top of which the bottom of the reservoir is closely fitted, and then coming in contact with the air admitted in sufficient quantity by means of the regulator, becomes vaporized, and the vapor passes through a tube attached to the side of the air-chamber, near the bottom, to the mouth-piece, and by thus inhaling the vapor, the rapid evaporation is prevented and a greater or less quantity administered to the patient as circumstances may require.

Claim.—The combination and arrangement of the reservoir, air-chamber, air-regulator, screen, valve, tube, and mouth-piece, substantially as described and for the purpose specified.

No. 35,258.—A. M. PUTMAN, of Antrim, N. H.—*Improvement in Pumps.*—Patent dated May 13, 1862.—The piston works within an inner cylinder, which is attached to an outer cylinder by division plates forming four chambers, the largest one of which serves as an air-chamber. The cylinders rest upon a base of sufficient depth to contain water-ways, and the valves being placed on the upper surface of this base, are readily accessible on removing the cylinder. Corresponding water-ways and ports are properly combined for operation.

Claim.—The described pump, consisting of the piston E, cylinders A and G, chambers H I J K, with ports *g* and *h* in combination with the base C, containing water-ways *i n q*, with open ports *r o*, and valves *l m s p*, arranged and operating substantially as described.

No. 35,259.—ANDREW RAWLSTON, of West Middletown, Pa.—*Improvement in Combined Rack and Trough for Feeding Stock.*—Patent dated May 13, 1862.—This invention consists in so constructing a feed-trough for stock, more particularly sheep, as to permit of their feeding from it without interfering with each other or jumping into the trough; while the food, if of coarse fodder, is properly retained in the trough, by a superincumbent rack, to prevent its being wasted; the sheep, while feeding, being protected from the weather by a waterproof covering. A portion of the feed-trough is capable of being removed and used separately as a shed when desirable.

Claim.—First, so combining a rack and trough that the superincumbent pressure of the rack shall hold coarse fodder in place in the trough, in the manner and for the purpose substantially as set forth.

Second, a removable protector L, adapted to be used upon the rack and trough, or separate therefrom, in the manner and for the purpose substantially as set forth.

Third, in combination with the rack H, having partitions *h h'*, the removable weather protector L, substantially in the manner and for the purpose set forth.

No. 35,260.—ELIAS REES, of Manassas Station, Va.—*Improved Blacksmith's Tongs.*—Patent dated May 13, 1862.—The upper jaw forms a part of the lower handle, and through the upper jaw passes a graduated bar, by means of which, in connexion with a screw, the upper handle is secured to the under jaw, so that the jaws may be set nearer to or further from each other. Secured to the lower handle is a standard, passing through a slot in the upper bar, for the purpose of keeping the jaws parallel with each other in opening and closing.

Claim.—The employment of the handles A B, the jaws C D, the bar E, screw F, and standard G, arranged and used together in the manner and for the purpose set forth and described.

No. 35,261.—S. G. REYNOLDS, of Bristol, R. I.—*Improvement in Power Spading Machines.*—Patent dated May 13, 1862.—The operating parts of this machine are carried by a platform, upon which are placed a suitable steam-boiler and cylinders. Motion is communicated to a series of spades at the rear of the machine, the spades being operated by cranks set in a curved or spiral line, so as to cause them to strike the ground successively as the machine moves along. For the purpose of preventing the spades from being injured by obstructions, the rods are provided with springs, which allow them to yield as the obstructions are met. Upon each side of the machine is a post having at its lower end a broad circular foot, which is held up from the ground by means of a lever. When the machine is to be turned, one of the posts is dropped to the ground and secured in position, so as to act as a pivot and retain one wheel, while the opposite one moves around.

Claim.—First, the combination of the series of cranks *m*, set in a curved or spiral line, and the shackle bars *t*, or their equivalents, with the spade-carriers O, for the purpose of giving the required motion to the spades, as shown, to enter the ground, pulverize the soil, and clear themselves, as described.

Second, the yielding spade-carriers, operating as set forth, for the purpose specified.

Third, in combination with a power spading machine, the pivot K^2, placed within the axis of the bearing wheels and operating as set forth.

Fourth, the combination of a mechanical spading machine with a harrow, when the harrow follows the machine, and is operated by cranks, in the manner substantially as set forth and for the purpose specified.

No. 35,262.—J. A. RHODES, of Providence, R. I.—*Improvement in Yarns for Warps.*—Patent dated May 13, 1862.—The inventor says: "The action of steam impinging the yarn whilst removed from the air by immersion, effectually expels the air from between the fibres, whilst the current of heated moisture carries with it the diluted or thinner portion of the size, which is thus made to penetrate to the inmost fibre and take the place of the expelled air. By this means, so minute a quantity of the size is incorporated with the yarn, and by the application of such intense moist heat, that the superfluous moisture is exhaled by exposure to the air, which is cooler, and the sized yarn dries as quickly as can be desired."

Claim.—The use of steam, impinging yarns, cloths, and other fibrous matter, while immersed in size, paste, or other fluid, with which said yarn, cloth, &c., is to be sized or dressed, substantially as described, for the purpose specified.

Also, the use of steam, impinging the surface of the roller *g*, or other device used for immersing or applying the size, paste, or other fluid, with which the yarn, cloth, or other fibrous matter is to be sized or dressed, substantially as described, for the purposes specified.

No. 35,263.—E. S. RITCHIE, of Brookline, Mass.—*Improvement in Mowing Machines.*—Patent dated May 13, 1862.—An endless band or belt of steel is arranged within an elongated frame or carrier, the lower part of which consists of a straight bar, provided with a series of teeth projecting laterally below the bar and over the knife. The endless-band knife extends around the periphery of a pulley provided with teeth on its inner side and around the guide pulleys. Within the carrier is arranged a cylindrical grindstone, having its lower side inclined to the knife, so that the endless knife, as it moves around, will rotate the grinder, by which means the cutting edge of the knife will be kept sharpened. By means of a clutch operated by a bent lever, the knife may be thrown out of action, and the carrier turned into a horizontal position, while the machine is moved to or from the field.

Claim.—The arrangement of a revolving knife, consisting of an endless band of spring steel, its driving pulley, a series of teeth, and a continuous or endless carrier or frame, substantially in manner and so as to operate as specified.

Also, the arrangement of the grinding wheel relatively to the endless-band knife.

Also, arranging the hand-knife carrier and driving pulley relatively to the axle and the wheels thereof, and applying the carrier to the axle by means of arms or equivalent devices, so that the carrier may be tilted or moved relatively to the wheels and axle, as specified.

Also, the combination of the clutch and its operative mechanism, substantially as described, with the driving wheel, the train of gears, and the knife-carrier, arranged and applied together, as set forth.

No. 35,264.—WILLIAM SEYBOLD, of McKeesport, Pa.—*Improvement in Miners' Lamps.*—Patent dated May 13, 1862.—The nature and object of this invention are explained by the claim. The lamp is designed to be attached to the cap or hat worn by the miner.

Claim.—Constructing lamps for burning tallow or other non-fluid fatty substances, with a wick tube of copper or other sufficient conductor of heat, surrounded by a hot-air chamber, for the purpose of melting the tallow or fat around the wick in the lamp, and keeping the tallow melted in the wick itself, substantially in the manner and for the purposes set forth.

No. 36,265.—J. D. SHULER and J. T. SHULER, of Lockport, N. Y.—*Improved Means for Manufacturing Baskets.*—Patent dated May 13, 1862.—This invention consists in the employment of a block or former provided with guides, cords, and gauge measures or marks, over which the basket is formed, so that it may be made accurately to a gauge of any desired dimensions and serve as a measure of capacity.

Claim.—First, constructing baskets over a block or former, in the manner and substantially as shown and described.

Second, the particular arrangement of the guides B, cord or band C, and grooves or gauge marks *a a'*, combined or used in connexion with the former, as and for the purpose specified.

No. 35,266.—EMERSON SMITH, of New Haven Mills, Vt.—*Improvement in Shingle Machines.*—Patent dated May 13, 1862.—This invention relates to a shingle machine in which a circular saw is employed for cutting the shingles from the block, and is designed to be operated by two persons. In the upper part of the main framing is placed a horizontal rectangular sliding frame which works directly over the saw, and is provided at each end with two longitudinal parallel shafts, one at each side, the latter having each two arms attached projecting inwardly toward the centre of the frame, each arm being provided with a pin projecting at right angles. The said pins fit in oblique slots made in vertical plates attached to a slide fitted in guides secured to the sliding frame. Each slide has a serrated plate attached to it which forms a jaw, by means of which the bolt is readily released and grasped at the will of the operator.

Claim.—The particular manner of operating or adjusting the jaws *j*, to wit, by means of the pins *e* attached to arms *d* on the shafts E, and fitted in oblique slots *f* in the upright plates *g* of the slides *h*, to which the jaws *j* are secured.

No. 35,267.—O. C. SMITH, of Salem, Mass.—*Improvement in Piston Packing.*—Patent dated May 13, 1862.—This invention consists in the employment of a series of arc-formed expanding pieces fitted to the interior of the wings, a hollow cone fitted to the hub of the piston and to the interior of the arc-formed expanding pieces, and a spring coiled around the hub between the cone and the cap or follower of the piston, for the purpose of producing an outward pressure against the interior of the wings, so as to hold them in contact with the cylinder and compensate for wear.

Claim.—The combination with the head A, cap C, and packing rings G G of the arc-formed expanding pieces F F F, the cone H, and spring I, the whole arranged, applied, and operating substantially as specified.

No. 35,268.—C. A. STRONG, of Brooklyn, N. Y.—*Improvement in Mode of Building and Coating Earth Fences.*—Patent dated May 13, 1862.—This invention consists in the employment of two sets of hinged boards placed in an inclined position towards each other, and between which is placed a filling of dirt and stones. This material is then firmly packed or stamped, and the boards or "moulds" removed and the material covered with a coating of cement.

Claim.—The described mode of building earth fences by means of a mould and coating them, substantially in the manner set forth.

No. 35,269.—GEORGE TAINTER, of Watertown, Mass.—*Improvement in Ventilating Dampers.*—Patent dated May 13, 1862.—This invention consists in the employment of a hinged conical damper and ventilating register, so constructed and applied to the flue or pipe of a stove or furnace that the damper will be opened and closed simultaneously with the adjustment of the register.

Claim.—The combination of the conical damper C and band or ventilating register B, connected together and applied to the flue or pipe for joint operation, substantially as and for the purpose specified.

No. 35,270.—JOHN TAYLOR, of Magnolia, Ill.—*Improvement in Rakes for Harvesters.*—Patent dated May 13, 1862.—This invention consists in increasing the radius of the circle described by the operating crank as it passes forward over the grain so as to pass entirely clear of it without at the same time throwing the rake too far forward or too far in the rear, the range of motion of the rake communicated by the crank, being varied by the use of cams on the crank pin of the crank shaft.

Claim.—The rake frame provided with slotted arms I I′ and the cross-bar K, in combination with the crank shaft G and cams L L′, as and for the purposes set forth.

Also, the rake J, provided with slotted arms I I′, and the cross-bar K, and hinged to the arms *c c′*, which are attached to the rock shaft H, in combination with the crank G and cams L L′, when the several parts are arranged for operation in connexion with each other and with the concave platform A, in the manner and for the purpose specified.

No. 35,271.—J. B. WHEELER, of Boston, Mass.—*Improvement in Stirring, Conveying, and Cooling Grain.*—Patent dated May 13, 1862.—This invention consists in the employment of a reciprocating carriage furnished with stirrers and conveyers which traverse over a perforated bottom, through which cool or heated air, or alternate cool and heated air, is driven or passes; the stirrers and conveyers being so arranged and operated as to completely move the whole of the grain as it passes over the perforated bottom from the inlet to the outlet, without drawing any of it back.

Claim.—First, in combination with a perforated bottom through which air is driven by a fan, a reciprocating carriage, which carries a series of conveyors and revolving stirrers that move and turn over the grain as it is being advanced over said perforated bottom, substantially as described.

Also, in combination with a reciprocating carriage, the conveyer G, which has, in addition to its forward and backward movement, a rising and falling movement, substantially in the manner and for the purpose set forth.

Also, in connexion with a reciprocating carriage, a section of conveyers composed of blades *m*, that are moved laterally by the cams *j* and *k*, in the manner and for the purpose set forth.

Also, in connexion with a reciprocating carriage, the hinged conveyer and stirrer *x* that acts while the carriage goes forward and swings up out of the grain when the carriage moves backward, for the purpose substantially as set forth.

No. 35,272.—E. J. WHITE, of Locke, N. Y.—*Improvement in Ploughs.*—Patent dated May 13, 1862.—Attached to vertically sliding standards which pass loosely through the main frame are ploughs, which are made to enter the earth more or less deep by means of levers which operate the sliding standards, and one or more ploughs may be used as required. Adjustable colters are also attached to vertically sliding standards and operated similarly to and in connexion with the ploughs. A gauge wheel is attached to the front part of the platform to insure a uniform depth to the ploughs.

Claim.—The ploughs M Q, when attached to vertical sliding standards L R, which pass loosely through the mounted frame or platform A, and are connected to adjusting levers K S, in combination with the vertically adjustable colters P T and gauge wheel X, all arranged for joint operation, as and for the purpose set forth.

No. 35,273.—E. D. WILLIAMS, of Philadelphia, Pa.—*Improvement in Wads for Ordnance and other Fire-arms.*—Patent dated May 13, 1862.—The wad is composed of two or more concavo-convex disks of metal, each having a series of radial openings so arranged with respect to similar openings in the other that the metal of one covers the openings in the other, the wad being of such a diameter relatively to that of the bore of the gun in which it is to be used, as to pass easily through the bore in loading, but that the explosive force of the powder in firing or the force employed in ramming the charge home will cause the disks to spread laterally and fill the bore between the powder and the projectile in such a manner as to prevent all escape of gases, and in rifled guns to communicate a rotary motion to the projectile.

Claim.—A wad composed of two or more concavo-convex disks of metal provided with slits *b b*, and combined substantially as specified.

No. 35,274.—ISAAC WINSLOW, of Philadelphia, Pa.—*Improvement in Preserving Green Corn.*—Patent dated May 13, 1862.—This invention consists in removing the corn from the cob, packing the kernels in cans hermetically sealed, and then boiling the cans until the corn contained therein is completely cooked.

Claim.—The described process of first removing the corn from the cob, and then preserving the kernels, substantially in the manner and for the purposes set forth.

No. 35,275.—ROBERT CHADWICK and NORMAN ALLEN, of Hartford, Conn., assignors to said ROBERT CHADWICK, of the same place.—*Improvement in Machine for Casting Bullets.*—Patent dated May 13, 1862.—This machine is composed of a series of bullet moulds pivoted to a circular frame which is arranged to rotate about a central shaft. Attached to the frame is a series of levers with appendages which are caused to open and close the moulds by the rotation of the levers with the moulds, around a suitable system of stationary cams. The molten lead is poured into the moulds successively, and after the metal is set the bullets are discharged by the rotation of the circular frame.

Claim.—The combination of a rotating mould frame E F, a series of moulds G G, a system of levers H H, and a cam or cams, the whole applied and arranged to operate substantially as specified.

No. 35,276.—A. L. FLEURY, of Philadelphia, Pa., and CHARLES ADAMS, of Pittsburg, Pa., assignors to W. J. CHEYNEY, of Philadelphia, Pa.—*Improvement in the Manufacture of Iron and Steel.*—Patent dated May 13, 1862.—The nature of this invention is explained by the claim. As the products of combustion are impelled along the passage towards the furnace a partial vacuum is caused therein, which tends to increase the draught, and also to condense the impurities which are mixed with the products of combustion, at the same time the carbonic oxide mixed with carbonic acid, which mixture constitutes the greater portion of the products of combustion, is restored to the furnace, and, while it increases the heat, tends to oxidize the iron in the furnace.

Claim.—First, directing a jet of steam into or toward a pipe or passage which forms a communication between the chimney or stack of a puddling furnace, cupola, blast, or other furnace, and the fireplace or body of ignited fuel within the said furnace, so that said steam may be mixed with a portion of the products of combustion, and the whole propelled along the said passage toward the furnace, for the purpose specified.

Second, introducing through the hollow bridge of a puddling furnace hydro-carbon alone, or hydro-carbon mixed with nitrogenous substances, or deoxidizing vapor, for the purpose specified.

No. 35,277.—C. W. ISBELL, of New York, N. Y., assignor to Himself and E. S. ELY, of Providence, R. I.—*Improvement in Explosive Projectiles.*—Patent dated May 13, 1862.—The object of this invention is to apply a percussion apparatus to a projectile in such a manner as to enable it to be made solid at the point or end which strikes, and also to enable it to be transported ready primed without danger.

The invention consists in attaching the hammer of the percussion apparatus to the rear portion of the projectile by a device which holds it back until the discharge of the projectile from the gun. The hammer, when liberated as the projectile is discharged, is held back by inertia until the projectile strikes, when its momentum carries it forward and causes it to explode the percussion.

Claim.—First, the attachment of the hammer of the percussion apparatus to the rear portion or breech of the projectile, substantially as and for the purpose specified.

Second, so constructing and applying the device for attaching and holding back the hammer within the projectile that it is caused to liberate the hammer by the driving forward of the rear portion of the projectile relatively to the front portion thereof, by the act of discharging the projectile from the gun, substantially as specified.

No. 35,278.—J. M. MARTIN, of Cleveland, Ohio, assignor to Himself and MYERS, UHL & Co., of the same place.—*Improvement in Construction of Monuments.*—Patent dated May 13, 1862.—This invention relates to the employment of a catch or fastening so constructed and arranged that mouldings or designs of any kind can be permanently secured to monuments or slabs of marble, so that the said mouldings, &c., may be left in relief, thus avoiding the necessity of cutting away the entire face of the slab of marble.

Claim.—The plate H, clutches O P, nut T, bolt U, springs M N, and heads K K′, these several parts being arranged in relation to each other and operating in the manner and for the purpose set forth.

No. 35,279.—THOMAS SHAW, of Philadelphia, Pa., assignor to Himself and P. S. JUSTICE, of the same place.—*Improved Means of Connecting Metallic Armor Plates for Marine or other Batteries.*—Patent dated May 13, 1862.—This invention relates to armor plates used

upon the sides of vessels. Two layers of plate are placed in proper position, and a space left between them into which a fusible metal is run, metal blocks being placed within the space to assist in attaching the fusible metal.

Claim.—The firmly uniting of armor plate by means of fusible metal, substantially as described.

No. 35,280.—ALONZO STREETER, of Adrian, Mich., assignor to Himself, THOMAS FARRAR, and AMZI CHASE, of Wellsville, Mich.—*Improvement in Corn Planters.*—Patent dated May 13, 1862.—This machine is designed to plant two rows of corn at the same time, and the invention consists in the employment of four hoppers in connexion with driving wheels, which latter, as the machine moves along, impart motion through a cam and shaft to the hoppers. When the machine is to be turned, after being drawn across the field, the operator presses a lever into a notch in the post K, which raises the shoes, cutters, and their connexions. By means of a crank, windlass, rope, and sheave, the slide and guides are moved to the right and left, and the succeeding rows are made parallel with those already made.

Claim.—First, the combination and arrangement of hoppers D and wheels B, as described, for the purposes described and set forth.

Second, the combination of the post K, lever G, shaft H, connexion I, spiral springs 4, connexion O, shoes Q, and cutters R, for the purposes set forth and described.

Third, the combination of the levers 5 with the elbow levers 2, for the purposes described.

Fourth, the crank U, windlass T, rope V, and sheaves W, in combination with slide P and guides S, for the purposes set forth and described.

No. 35,281.—JOHN THOMAS, of Indianapolis, Ind., assignor to Himself and J. M. LORD, of Marion county, Ind.—*Improvement in Rolls for Rolling Piles of Railroad Iron.*—Patent dated May 13, 1862.—The rolls used in this invention are constructed as shown in the engraving, the object being to completely confine and control the flux used in the process of wedding, and to concentrate the force upon the pile so as to preserve its compactness and prevent its spreading. The flux is prevented from escaping and forced along the seams as the full force of the rolls is brought to bear upon the pile.

Claim.—The rolls G and H constructed and arranged as and for the purposes set forth.

No. 35,282.—L. B. WATERMAN, of Chicago, Ill., assignor to Himself and JAMES S. BANGS, of the same place.—*Improvement in Cultivators.*—Patent dated May 13, 1862.—The adjustable seat is so arranged as to allow the feet of the operator to rest upon the beams below, by which it may be raised or lowered, as desired, by his weight, and thus the depth of the ploughs is regulated. The double-tree is secured to the under side of the tongue at a suitable distance from the axle, and to it are attached draught rods passing through a graduating bar so that the tongue can be properly adjusted to the necks of the animals.

Claim.—The arrangement of the adjustable seat D, in combination with the double-tree G, draught rods K K, and graduating bar I, when operated and attached to the framework for the uses and purposes described, as substantially set forth.

No. 35,283.—S. R. WING, of Sandwich, Mass., assignor to L. M. WING, of West Falmouth, Mass.—*Improved Rollers for Wringing Machines.*—Patent dated May 13, 1862.—This invention consists in making the rollers of cork or covering them with cork for the purpose of obtaining the required elasticity. Arranged upon cross bars are traversing guides which are pressed towards each other by means of springs fastened to the standards, for the purpose of pressing in the edges of the clothes as they enter between the rolls.

Claim.—One or more rollers made of or covered with cork, for the purpose specified, substantially as described.

Also, the self-adjusting traversing guides for pressing in the edges of the cloth or clothes as they pass in between the rollers, as described.

No. 35,284.—W. H. ELLIOTT, of Plattsburg, N. Y.—*Improvement in Breech-loading Fire-arms.*—Patent dated May 13, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—So constructing and arranging the sliding breech and hammer, in relation to each other, that when the former is thrown back the hammer will cease to act upon it to throw it forward, but will hold it from moving by a downward pressure, while the cartridge is being placed in the loading chamber, as set forth.

Second, the employment of a toggle joint for moving the sliding breech when that part of said joint which forms a portion of the lever *m* is pivoted to the sliding breech, and when the other part of said joint is pivoted to a fixed point upon the arm, substantially as set forth.

Third, the employment of the pin *s*, in combination with a trigger, which is attached to and swings back and forth upon the guard lever, and with a side lock sere, as specified.

Fourth, the arrangement and operation of the sliding breech and clutch, by which they approach each other and catch the head of the cartridge between them before driving it into the barrel chamber, as specified.

No. 35,285.—W. H. ELLIOTT, of Plattsburg, N. Y.—*Improvement in operating a Submarine Battery connected with a boat or other vessel.*—Patent dated May 13, 1862.—This invention consists in the employment of a magazine attached to an arm extending from a vessel under water; the said arm being attached to the vessel by means of joints, so that it may receive either a lateral or vertical motion by means of suitable machinery arranged within the vessel. An electrical current is employed for the purpose of firing a battery so connected with the vessel.

Claim.—First, the employment of a magazine which is controlled or governed by an arm attached to a vessel by means of joints, and arranged below the surface of the water, as and for the purpose specified.

Second, the employment of a float *h*, in combination with an arm and magazine which are attached to the vessel by means of joints, as set forth.

Third, the employment of a rudder *t*, in combination with an arm attached to a vessel by means of joints, as and for the purpose specified.

Fourth, arranging the arm *c* with the joints which attach it to the vessel, in such relation to the bulk that the magazine upon its extremity may be dragged through the water at the side of the vessel, when moving from place to place, as shown.

Fifth, the arrangement and combination of the arm *c*, joint *f*, and extension *e*, when employed in connexion with a magazine, as set forth.

Sixth, the employment of the hollow vertical shaft *x*, in combination with an arm *c*, and poles *v*, as and for the purpose specified.

No. 35,286.—JOHN ADAMS, of Pittsburg, Pa.—*Improvement in Preserve Vessels.*—Patent dated May 20, 1862.—Upon the upper surface of the cover are formed two inclined projections in the form of arcs concentric with the circular margin of the cover, and in the centre of the cover is a recess for the reception of a projection on the yoke. The ends of the yoke are hooked so as to catch under a collar or the neck of the jar or bottle, so that, as the yoke is turned around, the projections on the cover act like wedges to force it down upon the jar.

Claim.—The construction of the cover C with wedge-shaped projections *f f* in combination with the yoke B and the neck of the jar, as shown and described.

No. 35,287.—J. J. ALVORD, of Tecumseh, Mich.—*Improved Method of Moulding and Pressing Brick.*—Patent dated May 20, 1862.—This invention consists in the employment of an upright hollow cylinder, through which passes a vertical shaft. To this shaft there are secured spiral flanches and knives, the latter being attached to the shaft horizontally in pairs. To the inner side of the cylinder there are secured horizontal knives having a radial position. Below the upright cylinder is a box in which is placed a horizontal screw which conveys the clay to the moulds, the shaft of the said screw being connected to the vertical shaft by bevel gears. In the rear end of the box which contains the screw is mounted a wheel, having its periphery perforated with rectangular openings which form the brick moulds, each mould being provided with a piston or plunger. In the lower part of the box, and just in the rear of the wheel, is fitted, transversely, a box which serves as a scraper to take the superfluous clay from the periphery of the wheel, and to smooth and compact the clay at the surfaces of the moulds.

Claim.—First, the rotating, clay-grinding or tempering device formed of the knives D and spiral flanches C, shaft B, and the stationary knives E in the cylinder A, in combination with the feeding screw G in the box or receiver F, and the rotary mould wheel L, provided with the plungers *h*, substantially as and for the purpose set forth.

Second, the box T placed transversely in the lower part of the box or receiver F, and in such relation with the mould wheel L and projection *a'*, to operate as and for the purpose specified.

No. 35,288.—S. E. ANTHONY, of Stillwater, N. Y.—*Improvement in Shingle Machines.*—Patent dated May 20, 1862.—This invention consists in the employment of two gangs of saws, one gang being placed in an ordinary reciprocating gate or frame, and the other gang in a gate or frame which has a lateral as well as a reciprocating movement, all so arranged that the whole bolt may be sawed simultaneously into shingles of proper taper form without any waste of timber, a sufficient number of saws being used to correspond with the width of the bolt.

Claim.—The arrangement of the saws *c i*, the reciprocating gate B, and the laterally adjustable reciprocating gate D with each other and with the bar E, cleat *j*, and carriage F, the whole constructed and operating in the manner shown and described.

No. 35,289.—SARAH A. BALDWIN, of Waterbury, Conn.—*Improved Combination of Sofa and Bathing Tub.*—Patent dated May 20, 1862.—This invention consists in attaching to the sofa, beneath the seat, a box properly lined and prepared to answer the purpose of a bathing tub.

Claim.—As an improved article of manufacture, the combined sofa and bathing apparatus, substantially as described and set forth.

No. 35,290.—C. E. BANCROFT, of Waterbury, Conn.—*Improved Clothes Wringer.*—Patent dated May 20, 1862.—Fitting within mortises or grooves in the sides of the uprights are circular blocks, which operate by the pressure of springs on the ends of the shaft of the upper cylinder, and force the cylinder down upon the clothes as they are pressed between it and the lower cylinder.

Claim.—The shape and construction of the circular blocks I I, arranged and operating as described and for the purposes set forth.

No. 35,291.—L. A. BEARDSLEY, of South Edmeston, N. Y.—*Improvement in Hop Frames.*—Patent dated May 20, 1862.—This invention consists in interposing insulators formed of wood or other non-elastic non-conducting material between the lower and upper wires, which sustain them in such a manner that electricity will be prevented from passing from the lower to the upper wires. The training cords, which lead from the ground to the horizontal wires, are in pairs united at the ground, but held apart by spreaders of wood near the centre. The cords are attached to the upper wires by an S-shaped hook, the inner edges of the upper part of which are sharpened so as to prevent its slipping upon the wire.

Claim.—The employment of electric insulators in combination with two series of horizontal wires running at a right angle with each other, substantially in the manner and for the purpose set forth.

Also, the spreader *s* in combination with the divergent training cords *o* and *p*, substantially as and for the purpose specified.

Also, forming the training cords of wire intertwined with one or more fibrous strands, for the purposes specified.

Also, the use of the hooks *t*, having a sharp or annular inner edge, and otherwise constructed as described for the purposes set forth.

No. 35,292.—M. C. BOGIA, of Philadelphia, Pa.—*Improvement in India-rubber Sword Handles.*—Patent dated May 20, 1862.—This invention consists in combining a tube of gum-elastic with the shank of a sword or other like weapon for the purpose of affording a firm grip for the hand, preventing the abrasion of the skin, and avoiding the stunning and straining of the hand resulting from the repeated blows and shocks to which the swords are subjected.

Claim.—Combining a tube of gum-elastic with the shank of a sword, dagger, or other like weapon, substantially in the manner and for the purpose set forth.

No. 35,293.—JEHU BRAINERD, of Cleveland, Ohio.—*Improvement in Depilating and Bating Skins.*—Patent dated May 20, 1862.—This invention consists in the employment of unslaked lime gradually moistened with water which is combined with sulphur and water sufficient to form a thick paste. To this is added a solution of sulphate of potash or sulphate of soda. A proper portion of this compound is then mixed with the water in the depilating vat in which the hides or skins are immersed.

Claim.—The described compound for depilating and bating hides and skins, the same being combined in one operation, as specified.

No. 35,294.—S. A. BRIGGS, of Providence, R. I.—*Improvement in Heaters.*—Patent dated May 20, 1862.—On the top of the frame is fitted a drum which is in direct communication with the cold air pipe fitted within the furnace, and with which the hot air pipes communicate. Within the drum are placed two horizontal flues communicating with the furnace. Each flue is formed of curved passages communicating by means of a spout with a receiver underneath the ash-box.

Claim.—First, the flues H H arranged within the drum E, or at the upper part of the cold air pipe D, and used in connexion with the upper inverted conical parts *b d* of the furnace and cold air pipe, as and for the purpose specified.

Second, in combination with the flues H H, the spout J, provided with a central partition plate *i* and plates *h'*, and communicating with curved passages *h* in the flues for the purpose of rendering the same self-cleaning, as set forth.

Third, the combination of the furnace C, cold air pipe D, flues H H, and pipes I I, arranged as shown within the chamber B, for the purpose specified.

No. 35,295.—J. S. BROWN, of Washington, D. C., assignor to Himself and JOSEPH KENT of New Albany, Ind.—*Improvement in Water Elevators.*—Patent dated May 20, 1862.—The windlass is composed of a cylindrical portion on which the rope is wound, and a conical portion which causes the bucket to move over the discharging spout. The bail of the bucket has an eye at its centre projecting upwards, through which the rope passes, and over the eye is placed a short lever attached to which is a rope and chain connected with a valve in the bottom of the bucket. The valve is opened by means of the lever as the bail strikes the windlass. At the outer end of the discharge spout is placed another spout inclining towards and extending into the well for the purpose of preventing the water from dripping upon the platform.

Claim.—First, the conical portion *b* of the windlass, or its equivalent, for conveying the raised bucket over the discharging spout, arranged and operating substantially as specified.

Second, the lever I and double branch chain or cord *m*, acting in combination, substantially as specified, for lifting the valve.

Third, overbalancing the empty bucket G when suspended at or near the apex of the conical portion of the windlass by the crank or winch C, substantially as and for the purpose set forth.

Fourth, the dripping spout E, arranged and operating, in combination with the discharging spout D, substantially as and for the purpose specified.

No. 35,296.—WILLIAM BROWN, of Petersburg, Pa.—*Improved Washing Machine.*—Patent dated May 20, 1862.—This invention consists in the employment of a bar hinged to the uprights of the rubber, so that its lower part will fall by its own gravity on the rubbing board, for the purpose of griping the articles to be washed between it and the rubbing board.

Claim.—The griping bar D hinged to the uprights *a a* in the manner described and shown, for the purpose set forth.

No. 35,297.—CHARLES BUSHOR, of Philadelphia, Pa.—*Improvement in Machine for Loading Coals, &c.*—Patent dated May 20, 1862.—This invention consists in the combination of an elevator, with a movable carriage or truck provided with a mechanical power, whereby either the carriage may be propelled or the elevator operated, as may be desired.

Claim.—The arrangement of an elevator on a movable truck, for the purpose of loading coal, when the same are constructed and combined in the manner substantially as set forth and described.

No. 35,298.—ALVIN CAHOON, Jr., of Harwich, Mass.—*Improvement in Combined Spirit Levels.*—Patent dated May 20, 1862.—This invention consists in the employment of two horizontal spirit levels at right angles one to the other, one of them being adjustable in a vertical plane by means of a micrometer screw and scale, for the purpose of determining the "trim" of the vessel, and thereby indicating the proper disposition of the cargo for obtaining an even keel and the best sailing trim.

Claim.—The instrument described, consisting of two horizontal spirit levels at right angles one to the other, and one of them rendered adjustable in the vertical plane, for the purpose of determining the trim of a vessel, substantially as described.

No. 35,299.—L. S. CHICHESTER, of New York, N. Y.—*Improvement in Grain-Weighing Machines.*—Patent dated May 20, 1862.—This invention consists in the employment of a series of buckets revolving upon a shaft and fitted with a cut-off for shutting off the supply of grain and regulating the same so as to insure the proper amount to the required weight, each bucket being successively filled and emptied, and in their revolution causing an automatic adjustment of the scales:

Claim.—First, a series of buckets set between and revolving with heads on a shaft, when said buckets are hung on centres and allowed a limited amount of motion, the same insuring accuracy of weighing, as set forth.

Second, the employment of two cut-offs to the hopper, the first shutting off the main supply of grain, while the second regulates the supply necessary for making accurate weight, as specified.

Third, the arrangement of mechanism shown, consisting of the arms 6 and 7 and blocks 5 for actuating the first and second cut-offs as the buckets and scale beam descend, as set forth.

Fourth, the employment of the second or balancing weight *o* to act in insuring the accuracy of weight after the main body of grain has passed into the bucket, as set forth.

Fifth, the weights 8 and 9 to counteract the friction of the cut-off arms 6 and 7, in the manner set forth.

Sixth, the pawl *r*, applied and acting in the manner set forth, to hold the bucket in place and prevent any variation of the leverage of the same on the scale beam as the parts descend, as set forth.

Seventh, the employment of the rollers *v v* and heads *f f*, acting in the manner specified, to elevate the buckets and scale beam to their normal position as each bucket comes to its place, as set forth.

No. 35,300.—ABRAM CLOW, of Port Byron, N. Y.—*Improved Attachment of Whiffletree to the Tow Lines of Canal Boats.*—Patent dated May 20, 1862.—The object of this invention is to admit of the whiffletree being instantly detached from a tow line when the latter is drawn taut in case of a sudden necessity for such adjustment. On the centre of the whiffletree is a metallic collar having two lugs extending from its rear. Between these lugs is a hook working freely on a pivot, and having at its back part a hooked projection, over which passes a catch, by which it is retained so as to hold the tow line. This catch may be readily detached by the driver when necessary to release the tow line. A drop or guard fitted in the front end of the hook prevents the casual detachment of the latter.

Claim.—The combination of the guard *g* with the hook C, collar B, and catch D, all of said parts being constructed and operating as set forth.

No. 35,301.—C. C. CONVERSE, of Elmira, N. Y.—*Improved Mangle.*—Patent dated May 20, 1862.—This invention consists in the employment of two pressure rollers and an endless apron, the latter being applied to an adjustable extension frame, which is attached to the main framing, and is composed of four side pieces attached, two at the front and two at the back side of the machine, so as to be supported by props when in use. When not in use the frame may be folded up so as to occupy but little space.

Claim.—The pressure rollers B C and endless apron L in combination with the folding or extension frame K, all arranged and applied to the framing A, substantially as and for the purpose set forth.

No. 35,302.—J. C. CURRIER, of Bradford, Vt.—*Improvement in Window Sashes.*—Patent dated May 20, 1862.—This invention consists in the method of securing the lights or panes of glass in the sash, whereby the use of putty or other plastic material is avoided, and the panes readily inserted in the sash or removed therefrom when broken.

Claim.—A window sash having its top and bottom rails, *b b*, formed of two parts, 1 2, and its cross pieces *c* and stiles *a a* grooved, as shown, to admit of the insertion and securing of the panes *e* in the sash, substantially as shown and described.

No. 35,303.—H. G. DAVIS, of New York, N. Y.—*Improvement in Extension Splints.*—Patent dated May 20, 1862.—This invention is designed for use in case where a splint requires to be changed to different lengths and to sustain a strain extending over the part to which it is applied, as in many forms of chronic disease. The upper portion consists of a metallic tube, into which is fitted another piece provided with a screw thread cut to correspond with a third piece fitting over the tube and acting as a nut, by which the end may be extended or withdrawn as required.

Claim.—The described splint composed of the tube A, threaded part B, and vent or equivalent C, as a new article of surgical apparatus, the same being adapted to operate in the manner and so as to realize the advantages set forth.

No. 35,304.—S. F. DAY, of Ballston Spa, N. Y.—*Improvement in Instruments for Telegraphs.*—Patent dated May 20, 1862.—The object of this invention is to obtain a compact and portable instrument that can be placed in working order at any point in a very short time. It is designed to obviate the difficulties usually caused by the echo or the mingling of consecutive sounds upon the vibrations caused by sound boards and tensible wires.

Claim.—First, the combination with the sounding lever 6, having one or more armatures attached, and with the spring 13 of the adjustable counterpoise or balance weight 9, substantially as and for the purpose set forth.

Second, the combination of the adjustable counterpoise or balance weight 9, the sounding lever 6, having armatures 7 7′ attached, and spring 13, with one or more U electro magnets, constructed and arranged substantially as and for the purpose set forth.

No. 35,305.—R. E. DIXON, of New York, N. Y.—*Improvement in Tobacco Pouches.*—Patent dated May 20, 1862.—This invention consists in combining a small box or case for holding a pipe when not in use, with a bag or pouch for containing tobacco, which pouch is kept distinct from the pipe case by means of a valve covering a hole, and so arranged that, upon with drawing the valve, the pipe can be readily filled while in the case.

Claim.—The arrangement and combination of the pipe case A, valve *g*, and tobacco pouch B, substantially as described, so as to keep the two entirely separate from each other, but so that the pipe can be loaded whenever desired without opening the pouch or without the use of the fingers to load it, as is usually necessary.

No. 35,306.—A. P. DURANT, of Atlanta, Ill.—*Improvement in Combined Cultivator and Seeding Machine.*—Patent dated May 20, 1862.—The novelty of this invention consists in the arrangement of parts as specified in the claim, the several devices being disclaimed.

Claim.—First, the arrangement of the hopper box with its shaft, operated as described and by the means described, with the cultivator, constructed and operated as described.

Second, the arrangement of the sliding beam D with the levers H and I, and in connexion with the cultivator beam G, to enable the driver to operate the same, as described.

No. 35,307.—W. H. EARNEST, of Clarksburg, Va.—*Improvement in Cradles.*—Patent dated May 20, 1862.—This invention consists in the application of pivoted stops to the rockers of a cradle for the purpose of preventing the motion of the cradle when the baby is asleep, or to prevent its falling out by the tilting of the cradle.

Claim.—The employment of pivoted arms G G upon the rocker or rockers of cradles of the description represented and specified, for the purposes set forth.

No. 35,308.—N. F. ENGLISH, of Hartland, Vt.—*For Photographic Apparatus.*—Patent dated May 20, 1862.—This invention consists of an arrangement of movable supplementary lids or flaps attached and fitted to the lid of a trunk or box, whereby the latter may be readily converted into a "dark room" of about double the size of the box. Combined with the above

is a vessel for containing a developing solution, a fountain or vessel for water, and a system of valves, whereby the flowing of the solution over the plate, and of the water for washing off the said solution, are controlled by the hand of the operator outside of the "dark room," and the solution and water are caused to be delivered to the picture from the same tube or conductor, so that the water may wash away all trace of the solution from the conductor after the developing of the picture, and so prevent the staining of the next picture.

Claim.—The combination with the box A B B C C and the lid D of the end pieces G G, top piece E, and front piece F, the whole applied and arranged substantially as specified.

Second, combining the water fountain or vessel K and the vessel L, from which the developing fluid is used, by means of valves *k p* and a shoe piece N, or its equivalent, making one outlet for both vessels, substantially as and for the purposes specified.

No. 35,309.—W. D. GRIMSHAW, of Newark, N. J., assignor to Himself and C. A. TEN EYCK, of New York, N. Y.—*Improvement in Forging Hammers.*—Patent dated May 20, 1862.—This invention consists in the employment of a ratchet wheel and pawl connected with the main driving wheel, and between the latter and the cam which raises the hammer, so that the hammer is not obstructed in its fall by the slowness of motion of the propelling power, the ratchet allowing the parts to turn faster than the power as the hammer descends, thus avoiding what is technically called the "back lash." The driving power and hammer are so arranged that the hammer itself can be made to operate successively upon several anvils set in a circle, so that the heavy parts of hand forging can be readily arranged for several gangs of workmen. An air vessel is also arranged in such a manner that the elasticity of the air can be made to lessen the blow or hold up the hammer, or to increase the force of the blow.

Claim.—First, the lifting slot 5, formed as shown, and arranged in connexion with the crank pin 4, shaft 2, ratchet wheel *l*, pawl 3, and wheel *k*, as and for the purposes specified.

Second, arranging the hammer *q*, arm *o*, parallel motion bar *r*, and lifting rod *n*, in the manner and for the purposes specified.

Third, the arrangement of the wheel *k*, belt *i*, shaft *f*, and pinion *e*, in combination with the forging hammer and series of anvils, in the manner and for the purposes specified.

Fourth, the air cylinders *t*, with the valves 10 and 11, in combination with the wheels *k* and *l*, shaft 2, rod *n*, and arm *o*, to the hammer *q*, the parts being arranged and acting as and for the purposes specified.

No. 35,310.—E. D. GRIGGS, of Waterbury, Conn.—*Improvement in Photographic Albums.*—Patent dated May 20, 1862.—The object of this invention is to adapt metallic mats to the leaves of photographic albums, and it consists in securing such a mat in place by providing it with a flanch, which is interposed between the outer sheet of card board or other material which forms either surface of the leaf, and the middle or back piece or body of the leaf, and held in place by the union of the said outer sheet with the middle or back piece or body.

Claim.—Combining the mat with the pieces A B B, by means of a flanch *a a* interposed and secured between the said pieces, substantially as specified.

No. 35,311.—W. F. GOODWIN, of Powhatan, Ohio.—*Improvement in Breech-loading Ordnance.*—Patent dated May 20, 1862.—The nature of this invention will be understood from the claim.

Claim.—First, the method of locking the breech piece with, and unlocking it from, the rear end of the barrel, by means of one or more keys passing through the breech and entering recesses in the barrel, as described, and by combining with said keys a system of levers arranged in relation to the breech handle and the said keys so as to operate the latter in the act of depressing the breech by grasping the handle, as set forth.

Second, the method described of constructing the breech piece in three parts, under the arrangement set forth, and when combined with wedges or keys to tighten the breech, and thus insure perfect frictional contact of the breech and barrel.

Third, providing the sides of the rear end of the barrel with trunnions upon which to hang the breech, in combination with the steps or projections and grooves, in the manner and for the purpose set forth.

No. 35,312.—RICHARD GRISWOLD, of Bainbridge, N. Y.—*Improvement in Metallic Pens.*—Patent dated May 20, 1862.—This invention consists in applying to an ordinary metallic pen a plate which is fitted in the slit of the pen, so as to project both below and above it, for the purpose of rendering the pen capable of holding a large quantity of ink.

Claim.—A pen A, provided with a longitudinal plate B, inserted in its slit *a*, so as to project above and below the pen about at right angles therewith, substantially as and for the purpose set forth.

No. 35,313.—J. D. and A. M. HALSTED, of Rye, N. Y.—*Improvement in Hand Cultivators.*—Patent dated May 20, 1862.—This invention consists in attaching a set of knives, formed in such a manner as to cut obliquely across the ground, to two arms secured by a clip or clasp to an axle, so arranged as to cut the weeds from the rows of small plants without disturbing the soil around the roots. The arms may be adjusted to cut between rows of greater or less

distance apart, and secured in position by means of clamps upon the forked ends of the handle.

Claim.—The combination of the sets of knives 1 1, as described, with the arms 2 2, to which they are attached, and with the clip 5, shaft or axle 3, wheels 4, handle 7, and clamps 8 8, the whole being constructed and arranged substantially as described, and operated as set forth.

No. 35,314.—A. K. HAY, of Winslow, N. J.—*Improvement in Glass Furnaces.*—Patent dated May 20, 1862.—This furnace is composed of a heating apartment with two fireplaces, a heating platform and two pits, an intermediate compartment with two platforms and a continuation of the said pits, and an annealing compartment; the whole so arranged that the operations of heating, flattening, and annealing may be continuous and rapidly accomplished with a comparatively small cost of construction and with economy in the use of fuel.

Claim.—The described furnace, composed of the heating compartment, with its two fireplaces C and C′, platform D, and two pits E E, the intermediate compartment, with its platforms L L, and its continuation of the said pits, and the annealing compartment H, the whole being arranged substantially as and for the purpose set forth.

No. 35,315.—REUBEN HOFFHEINS, of Dover, Pa.—*Improvement in Harvesters.*—Patent dated May 20, 1862.—To the inner side of the platform is rigidly secured a post or standard inclining over the rear of the main frame, and supported by a brace rod extending from the draw-bar. On the top of this post is mounted a box which constitutes a bearing, in which a disk is caused to rotate. The rakes or reel arms are mounted in couples in the ends of horizontal shafts which are journaled at right angles across the rotating disk. As each reel arm approaches the rear of the main frame it is turned backward and upward completely over the frame, causing the reel arm which is attached in front to the same shaft, to descend at the side of the wheel, where it operates to present and hold the standing grain to the action of the cutters, and so pass over the platform. Fitted loosely upon a shaft is a clutch pulley, which rotates as the machine moves forward by means of a pin on the shaft taking into notched teeth on the face of the pulley. Around this pulley passes a band, which also passes around a pulley journaled in a stationary segment attached to the top of the inclined post or standard beneath the rake head, which permits the band to conform to the changing angle of the pulley, as the outer end of the platform rises and falls.

Claim.—First, a combined reel and rake, rotating upon a vertical axis, and having its arms successively turned up into an inverted position, so as to pass over the main frame substantially as explained.

Second, the inclined standard I, rigidly mounted upon a loosely hinged platform, and employed to support a revolving reel and rake in an unchangeable position in relation to the platform, without obstructing the free motion of the latter.

Third, the yielding and swivelled rod Q, operating in combination with the band P and pulleys O and R, in the manner and for the purposes shown and explained.

No. 35,316.—J. R. HOWARD, of Worcester, Mass.—*Improved Fountain Blacking Brush.*—Patent dated May 20, 1862.—This invention consists in providing the brush with a reservoir for holding the blacking, between which reservoir and the brush for applying the blacking, is a tube having a stop-cock which is operated by means of a rod extending to the rear of the brush, to let out the proper quantity of blacking. The stop-cock is kept closed by means of a spiral spring on the rod.

Claim.—The described blacking brush, consisting of the brushes, the reservoir, and the self-closing apparatus, when constructed and operating substantially as set forth.

No. 35,317.—SAMUEL KEELER and JACOB BARTHEL, of Lancaster, Pa.—*Improvement in Seeding Machines.*—Patent dated May 20, 1862.—This invention consists in making one or both of the flanges adjustable, by keeping them on the shaft more or less removed from the central core or ridged cylinder, the ridges rising from the core or central axis of the cylinder as high as the flanges, being inserted diagonally, the object being to obtain the advantage of open cells, and at the same time to obviate the tendency to clog their delivery when the drill becomes inclined on hillsides.

Claim.—The improvement in the cylinder, by making it with flanges adjustable, as described.

No. 35,318.—JOHN LEMMAN, of Cincinnati, Ohio.—*Improved Mortising Machine.*—Patent dated May 20, 1862.—This invention relates to an adjustable provision for cutting mortises of any desired upward or downward curve, or perfectly straight, or for boring one or more round holes either in straight or curved lines, the device being more particularly designed for making the curved and other mortises of chair stuff.

Claim.—The mode of supporting and guiding the mandrel on the curved bar F, adapted for vertical and angular adjustment, substantially as and for the purposes set forth.

No. 35,319.—W. A. LIGHTHALL, of New York, N. Y.—*Improvement in Condensers for Making Potable Water.*—Patent dated May 20, 1862.—This invention is designed as an improvement upon the apparatus for which patents were granted to the said Lighthall, on December 17, 1861, and April 22, 1862; and it consists in dispensing with the "drip-plate" described in the aforesaid patents, and in so arranging and constructing the discharge-pipe for the discharge of the water of condensation as to retain within the bottom part of the condenser (forming the reservoir thereof) a sufficient quantity of the water of condensation to cover the lower ends of the division plates, so that the steam entering into the condenser shall be passed from section to section as though the "drip-plate" were used.

Claim.—The combination of the discharge-pipe A with the series of cooling tubes D, arranged and operated as and for the purpose set forth.

No. 35,320.—EDWIN MAY, of Indianapolis, Ind.—*Improvement in Apparatus for Casting Bullets.*—Patent dated May 20, 1862.—This invention consists in a method of casting conical and hollow bullets, and swaging the same while the lead is in a plastic state, making the bullets without a neck and ready for use as they leave the moulds.

Claim.—First, the casting of conical and hollow bullets, and swaging the same while the lead is in a plastic state, by means of the moulds *i i*, in combination with the plungers *h h k k* and the springs *e e e e*, when constructed and operated substantially as and for the purposes set forth.

Second, the adjustable moulds *i i* and clamps *j j*, in combination with the lever *a* and *d*, when constructed and operated substantially as and for the purposes set forth.

No. 35,321.—J. H. MEAD, of New York, N. Y.—*Improved Soap Cups for Washstands, &c.*—Patent dated May 20, 1862.—This invention consists in providing the bottom of the dish with a series of recesses and projections formed with the dish, so that when soap is laid thereon it will not come in contact with any water that may escape from the soap into the dish.

Claim.—As a new article of manufacture and trade, a dish or vessel having its bottom constructed substantially as described, and for the purpose set forth.

No. 35,322.—J. W. MOORE and W. H. ELLIOT, of Plattsburg, N. Y.—*Improvement in Lanterns for Marine Telegraphs.*—Patent dated May 20, 1862.—This invention consists in the employment of several glasses of different colors, with one light, so arranged in relation to the reflector and the other portions of the lantern, as to be made to produce lights of several different and distinct colors, in any required order. The outer case, lamp, chimney, and chimney-cap remain stationary, while the colored glass and the reflectors are caused to revolve by means of a spring.

Claim.—First, the alternate arrangement of the colored glasses *m* with the opaque divisions *n*, when these are employed with opening *j* in the outer shell *a*, as and for the purpose specified.

Second, the alternate of the glasses *m* and reflectors *n* in the revolving lantern *b*, as and for the purpose specified.

No. 35,323.—J. B. MURRAY, of New York, N. Y.—*Improved Mode of Collecting Letters on Street Railroad Cars.*—Patent dated May 20, 1862.—The nature and object of this invention are explained by the claim.

Claim.—Collecting and conveying letters and other mail matter to the post office, in towns and cities, by means of properly secured letter boxes or other suitable repositories for the reception of drop-letters, in combination with street railway cars, or other suitable public vehicles, such as are used for local passenger conveyance on stated routes in towns and cities, substantially as described.

No. 35,324.—J. H. NEWCOMB, of Port Norris, N. J.—*Improvement in Dredging Machines.*—Patent dated May 20, 1862.—This invention consists in attaching to the frame of an ordinary dredging machine, guards or fenders so constructed as to act as aids to the teeth during the process of dredging, and also to prevent the teeth from catching or becoming fastened under the rails or chocks of the vessel, as the apparatus is raised from the water to the deck of the vessel.

Claim.—The application of guards or fenders *c d e c′ d′ e′* to machines for dredging oysters, coal, or other sunken objects, said guards or fenders being constructed and operating substantially in the manner and for the purposes set forth.

No. 35,325.—HENRY REDLICH, of Chicago, Ill.—*Improved Apparatus for Corking Bottles.*—Patent dated May 20, 1862.—This invention consists in the employment of a wooden or metallic box having a conical bore, the lower and smaller diameter of which corresponds with the orifice of the neck of the bottle to be corked, the said box being provided with a plunger, and also with a cap fitting upon it like an ordinary box-lid, which serves as a guide for the plunger. The cork being placed within the box, is forced through it into the bottle.

Claim.—The box A, provided with an inverted conical bore B and plunger D, in combination with the movable cap C, substantially as and for the purpose set forth.

No. 35,326.—W. B. RYAN, of East Pembroke, N. Y.—*Improvement in Potato Diggers.*—Patent dated May 20, 1862.—The shaker consists of a number of prongs connected to a back piece, which is hinged to the rear edge of the cutter. The outer prongs of the shaker are connected by rods to a rock-shaft, to which a vertical motion is given by means of arms and trips upon a wheel or disk connected to the hub of the driving-wheel. Hinged to the draught pole is a rectangular frame arranged to be raised by means of a lever, which also raises the cutter from the ground, the rock-shaft being thrown out of gear, while the machine is moved to and from its field of operation.

Claim.—Giving the shaker L an up-and-down percussive motion, as distinguished from a horizontal vibrating motion, by means of the rock-shaft K and arms K′, wheel *n*, trips *n*′, and constructing rods M, substantially as set forth.

Also, the hinged frame G, in combination with the shaker L, arms H, rods F and M, and cutter E, for the purposes and substantially as described.

No. 35,327.—O. SAGE, of Wellington, Ohio.—*Improvement in Cheese Vats.*—Patent dated May 20, 1862.—The furnace, which is supported in the bottom of the water box, is oblong, and has a converging top, provided with a series of short inclined pipes passing through its upper part, which communicate with the water at each end, for the purpose of obtaining a quick and even heat, which, in turn, is communicated to the milk.

Claim.—The combination with the lower part of the water box or chamber of an oblong or top-inclined furnace, having inclined cross tubes, the parts being arranged in relation to each other as and for the purposes set forth.

No. 35,328.—F. A. SALISBURY, of Greene, N. Y.—*Improved Knife-cleaning Box.*—Patent dated May 20, 1862.—This invention consists of a sliding box having a perforated bottom, through which the polishing powder is sifted, the said box being secured over a rubber in such a manner as to be capable of being moved on either side so as to emit the powder or prevent it from discharging when the box is in place, the whole to be enclosed within a box when not in use.

Claim.—As a new article of manufacture, the polishing box D, having a wire gauze or a perforated bottom, in combination with the rubber C, the whole being arranged, operated, and incased in the box A, substantially in the manner described and for the purposes specified.

No. 35,329.—GERARD SICKLES, of Roxbury, Mass.—*Improvement in Metal Plates for Protecting the Soles of Boots and Shoes.*—Patent dated May 20, 1862.—This invention is explained by the claim.

Claim.—As a new article of manufacture, a protector for the soles of boots and shoes, consisting of a small disk of metal, formed with sharp points or spurs around its periphery, projecting at right angles to the plane of the disk, and adapted to secure it to the sole by driving into the leather, as described.

No. 35,330.—NELSON SILVESTER, of Granger, Ohio.—*Improved Foot Corn Planter.*—Patent dated May 20, 1862.—The platen is strapped to the sole of the foot of the operator, and, as the corn is dropped through the receiving tube, the operator, in the act of walking, forces the lower end of the planter into the ground, and the piston, which is attached to the platen, forces the corn into the ground. Attached to a lever, which is operated by the motions of the piston, is a shovel, which serves to cover up the corn by scraping the soil into the hole made by the piston, as the latter is raised.

Claim.—The lever J and shovel I, in combination with the platen G and piston H, arranged and operating as and for the purposes set forth.

No. 35,331.—S. E. SOUTHLAND, of Jamestown, N. Y.—*Improved Device for Fastening Cattle.*—Patent dated May 20, 1862.—This invention consists in the arrangement of two neck bars or stanchions in a suspended frame, so constructed as to swing forward and back; also, in the arrangement of two neck bars, each made of two parts, connected together by pivots, and attached to each other by means of a hinge joint, in combination with a round bar, from which the neck bars are suspended, and to which one of the same is attached, so that it is prevented from moving in a longitudinal direction, while the other is free to slide on the suspension rod towards and from the said neck bar, so that by drawing the upper ends of the necklace together on the neck of an animal, the latter is secured, and, by opening the neck bars, the animal is released. A longitudinally sliding bar is so arranged in connexion with a series of neck bars that, by the motion of the sliding bar, the neck bars may be simultaneously closed or opened, and a number of cattle can be fastened or unfastened at once.

Claim.—First, the arrangement of the suspended swinging frame D, so constructed by means of hinged joints, or their equivalents, as to swing forward and backward in combination with neck bars A A′, or their equivalents, constructed and operating substantially as and for the purpose set forth.

Second, the neck bars A A′, connected at the bottom by a pivot *c* or its equivalent, and so constructed as to open and close, and to swing forward and back, and right and left, substantially in the manner and for the purpose shown and described.

Third, the arrangement of the longitudinally sliding bar E, in combination with the swinging neck bars A A′, constructed and operating substantially as and for the purpose specified.

No. 35,332.—JOHN SPERRY, of New York, N. Y.—*Improvement in Veneer-Cutting Machines.*—Patent dated May 20, 1862.—This invention consists in suspending the table or platform which carries the logs from two or more pivots inserted in disks or arms attached to the ends of rotary shafts in such a manner that, by imparting to the said shafts a rotary oscillating motion, the log carrier receives a compound motion around the centres of said shafts, and in a direction parallel to a line drawn through the said centres, by which means the log is brought in contact with the knife by a rotary drawing motion, and the cutting operation considerably facilitated.

Claim.—Suspending the log carrier A or the knife F from two or more pivots *a*, projecting from rotary or oscillating arms or disks B, substantially in the manner and for the purpose shown and described.

Also, imparting to the log carrier or to the knife a rotary drawing motion, substantially such as described, for the purposes set forth.

No. 35,333.—W. T. SPIES, of Baltimore, Md.—*Improvement in Railroad Car Coupling.*—Patent dated May 20, 1862.—This invention consists in the employment of a movable block of iron or other suitable material, which is inserted in the opening of the buffer for the coupling bolt to rest upon before dropping into its place. A notch is made on the face of the block to hold the coupling link in position, so as to enter the opposite buffer. The seat of the buffer is made convex on its inner side, to adapt it to the connecting link, and the latter is made concave on one edge and convex on the other, so as to admit of its being raised or lowered to meet the opposing buffer.

Claim.—The combination and arrangement of the movable block, with its notch for holding and regulating the coupling link with the concave and convex form of the coupling link, and the convex form of the inside seat of the buffer, in the manner described, and for the purpose of forming a self-coupling buffer for the connexion of railroad cars.

No. 35,334.—C. B. TATHAM, of Brooklyn, N. Y.—*Improvement in Apparatus for Casting Minie Balls.*—Patent dated May 20, 1862.—The object of this invention is to insure the centrality of the hole in the base of the ball, and also to insure a sound casting. Instead of suspending the cores within the chamber from a movable cap, they are so arranged that each is separately held centrally in place within its chamber by the pieces which form the chamber, so that the variation of expansion carries the cores in the same direction, and they are always held in the same relative position in the centre of the chamber. Instead of casting the ball point downwards, and filling the moulds at the base of the ball through holes at the side of the cores, as is usual, they are cast point upwards, and filled at that end under a considerable head of surplus metal, so that the point of the ball is formed last, and the head or pressure of the metal insures a solid casting. The cores are so arranged that they can be withdrawn at the bottom before the moulds are opened, for the purpose of facilitating the removal of the balls from the mould.

Claim.—First, the means, substantially as described, of forming the hole in the base of the ball by a core held in its place within the chamber by its contact with the piece or pieces which form the same, so that any expansion or motion of the mould will carry the cores therewith, and maintain their central position within the chambers.

Second, in combination with means substantially as described, of preserving the centrality of the cones under movements or varying expansion of the mould, removing a number of such cores, and returning them to their places at a single operation, by the means substantially as described.

Third, in combination with means substantially as described, of preserving the centrality of the cores, and with means substantially as described of removing and returning to their places a number of such cores, the use of chambers, so located and arranged as to be filled through the points thereof, and to allow the metal to set under a head, with the points of the balls directed upward, for the purpose of simplifying the construction of the apparatus, and of increasing the solidity of the balls.

No. 35,335.—MINER VAN AUKEN, of Amsterdam, N. Y.—*Improved Clothes Wringer.*—Patent dated May 20, 1862.—The under pressure roller is composed of two "lever" cores, their interior being of conical form, having their bases at the extremities of the cores, and are encompassed by a cylinder of rubber. Above the rollers is placed a spring formed of a single piece of suitable material, with kerfs in each end of varying length, thus forming spring leaves. The power of the spring is regulated by a crank screw passing through the centre of the upper brace bar, which permits a rocking motion of the spring. To the centre

of the lower brace bar is attached a knee provided with a set screw for the purpose of securing the wringer to the washtub. Applied to the frame is an arm which receives eccentric levers having near their ends a relief roller for the purpose of guiding the clothes from the pressure rollers to a receptacle outside of the tub.

Claim.—First, the application and use of one or more lever cores *k*, or their equivalents, substantially in the manner and for the purpose set forth.

Second, the spring G, or its equivalent, constructed and applied substantially in the manner and for the purpose set forth.

Third, in combination with the boxes F and crank screw H, extending the lower limb *m* of the spring G, outside the standards A, or in an equivalent manner supplying the means whereby the lateral movement of the spring may be prevented, as described.

Fourth, the application of the lever screw H, or its equivalent, in such manner as to permit of the oscillation of the spring G, substantially as described.

Fifth, the application of a single lever knee P, or its equivalent, to the girt C, substantially in the manner and for the purpose set forth.

Sixth, the eccentric lever arms V, or their equivalents, for the purpose set forth.

Seventh, one or more relief rolls, or their equivalents, as and for the purpose set forth.

No. 35,336.—J. E. THOMSON, of Buffalo, N. Y.—*Improvement in the Manufacture of Illuminating Gas.*—Patent dated May 20, 1862.—The nature of this invention is explained by the claim.

Claim.—The manufacture and use of an illuminating gas produced by a combination of petroleum or rock oil, or other hydrocarbon gases, petroleum being used by preference, with combination gases produced by the action of water in a spheroidal state on hydrocarbon vapors, substantially as described.

No. 35,337.—JULIUS THOMPSON, of Taunton, Mass.—*Improvement in Screwdrivers.*—Patent dated May 20, 1862.—This invention consists in providing the screwdriver with a short bar or arm pivoted near its point so as to act as a lever in driving a screw 'home.'

Claim.—The combination of the lever B with screwdriver A, substantially as described and for the purpose specified.

No. 35,338.—MADISON VEDDER, of New York, N. Y.—*Improvement in Catamenial and Urinal Bandages and Receptacles.*—Patent dated May 20, 1862.—The nature of this invention will be understood by reference to the claim and engraving.

Claim.—First, the combination of the catamenial receptacle A and urine pouch B, substantially as and for the purpose specified.

Second, providing for the ventilation of a catamenial receptacle by means of holes *i i* in the sides thereof, substantially as set forth.

Third, making the connexions C C′ between the front and back of the catamenial receptacle and the girdle, which attaches it to the body or any portion of such connexions, of tubular form, whereby they are made to serve the additional purpose of ventilating the receptacle, substantially as specified.

No. 35,339.—JULIUS VON HOFE, of New York, N. Y.—*Improvement in Tips for Fishing Rods.*—Patent dated May 20, 1862.—This invention consists in the employment of a tip formed with projecting jaws receiving between them a sheave, and provided with a guide or guides for the purpose of preventing the cord or line from getting off the sheave or being cut or entangled while in use.

Claim.—The fishing-rod tip formed with the guide *o* and receiving the sheave *i*, in the manner and for the purposes substantially as specified.

No. 35,340.—C. H. WALKER, of Warren, Mass.—*Improved Chest of Drawers.*—Patent dated May 20, 1862.—The object of this invention is to provide a receptacle capable of holding in a compact form all the articles generally used by housekeepers in the performance of their household duties.

Claim.—As a new article of manufacture, a chest A′, provided with drawers A, sieve B, drawers C D E, adjustable moulding board F, extension I, slide M, and closet N, all arranged in the manner and for the purpose described.

No. 35,341.—GUSTAV WEDEKIND, of Philadelphia, Pa.—*Improved Shade Holder for Gas Burners or Lamps.*—Patent dated May 20, 1862.—This invention consists in forming the ring of the shade holder with an opening at one side, and providing one end with a tongue which passes into a hole in the other end, where it is secured like a strap, by means of which the shade may be securely held upon the gas burner. The braces which connect the upper and lower rings or wires are bent in such a manner as to support a chimney when necessary.

Claim.—The combination of the clasp, open ring, or buckle *d*, with a shade holder, substantially as and for the purpose set forth.

Also, in combination with the shade holder, the supports *i* in the braces for holding a chimney or protector, substantially as described.

No. 35,342.—C. S. WESTCOTT, of New York, N. Y.—*Improved Device to Prevent Opening Letters without Discovery.*—Patent dated May 20, 1862.—This invention consists in placing upon an envelope or letter a device or inscription in an ink or paint so soluble in water that moisture cannot be applied to open the envelope, &c., without defacing the same.

Claim.—The formation of any letter, inscription, or device, upon a letter, envelope, or material to be used as a seal, in an ink or paint which will be destroyed or defaced by an attempt to open a letter, envelope, or package, upon which the same is placed

No. 35,343.—J. R. WHITTEMORE, of Chicopee, Mass.—*Improvement in Rakes for Harvesters.*—Patent dated May 20, 1862.—This device is designed to be applied to reapers or harvesters in which the grain is made to fall on a table or platform on the machine after being cut, from which platform it is to be raked when a sufficient quantity is cut to form a bunch of suitable size. Upon a horizontal shaft, to which motion is communicated from the main shaft, is a pinion working in a gear, the back of which forms a cam plate. Upon the cam plate is a stud or pin which works in a cam slot in a lever fulcrumed to an arm on the frame. This lever is provided with two arms, which form bearings to support a short shaft to which the rake is attached. The rotation of the cam plate imparts to the rake a swinging reciprocating motion. By means of a series of two or more concentric gears on the under side of the cam plate, the latter can be so arranged with the pinion as to cause a more rapid rotation when necessary, to make a more frequent removal of the hay from the platform.

Claim.—The combination of the rake Q and plate cam G, when arranged substantially in the manner and for the purpose described.

No. 35,344.—HOSEA WILLARD, of Vergennes, Vt.—*Improved Looking Glass.*—Patent dated May 20, 1862.—This invention is explained by the claim.

Claim.—As a new article of manufacture, a mirror or looking-glass for domestic or household use, constructed of a plurality of panes placed in contact with each other so as to form a longitudinal section of a polygon, as set forth.

No. 35,345.—E. C. WILSON, of Peekskill, N. Y.—*Improved Stair-Rod Holder.*—Patent dated May 20, 1862.—The stair-rod is held in place by a clasping spring, the back of which is fastened at the top to the riser of the step, and its lower end is fastened to the tread or horizontal part of the step by a small point which pierces the wood. The spring turns upward with a curve, and yields so as to admit of the rod being pushed down through the opening at the top.

Claim.—The application of the clasping spring *b* with back *c* and point *a*, all arranged as a stair-rod holder, substantially as described.

No. 35,346.—ISAAC WINSLOW, of Philadelphia, Pa., assignor to J. W. JONES, of Portland, Maine.—*Improved Process of Preserving Green Corn.*—Patent dated May 20, 1862.—This invention consists in sealing up the corn after its removal from the cob, and the boiling or steaming the same without allowing the corn to come in contact with the water or steam.

Claim.—The described process of preserving Indian corn in the green state, without drying the same, the corn being sealed hermetically in cans or other vessels, and then exposed to heat, substantially in the manner and for the purposes set forth.

No. 35,347.—T. C. BALL, of Springfield, Vt., assignor to Himself, D. M. SMITH, H. H MASON, and A. C. MASON, of the same place.—*Improvement in Blind and Shutter Supporters.*—Patent dated May 20, 1862.—In the lower cross-piece of the blind there is fitted vertically a catch formed of a pin having a square loop or eye at its lower end, and which is kept in a raised position by a spring. Secured to the sill and to the building are hooks, each having a bevelled surface and a recess so that the catch readily passes over either hook, and the blind will rest upon the same, and so be prevented from sagging.

Claim.—The combination of the catch D with the blind and the lifting hooks E F, in the manner and for the purpose shown and described.

No. 35,348.—JOHN HOWE, JR., F. M. STRONG, and THOMAS ROSS, of Brandon, Vt., assignors to JOHN HOWE, JR.—*Improvement in Portable Platform Scales.*—Patent dated May 20, 1862.—The object of this invention is to obtain a platform scale which will be capable of being folded in a compact form when not required for use, the parts being protected so as not to be liable to injury in transportation, and at the same time admit of being readily adjusted for use.

Claim.—First, the lever frames B B′ and platforms C placed within the lower part A of a box, in combination with the beam G placed within the upper part or cover F of the box, and connected to the lever frames, as shown, and all arranged in such a manner as to admit of the part or cover F, when the scales are not in use, being folded down on the part A to form a receptacle for the scales, as set forth.

Second, the slide L and arm *p*, or their equivalents, when placed within the box or the cover thereof, and in relation with the beam G, as shown, for the purpose of raising the fulcrum *h* of the beam off from its bearings, and preserving them from wear.

Third, the elastic bearings O O′, in combination with the scale and box, all arranged as and for the purpose set forth.

Fourth, the hook *k* and spring *l*, when used in connexion with the box and scale, and placed in such a relation with the weight supporter I as to properly hold the same when the box is in a closed state.

Fifth, the rod or shaft *i*, provided with the plate *u* and fixed weights *t*, substantially as shown, for the purpose of holding the scale weights *s*, when not in use, within the box, as set forth.

No. 35,349.—C. F. MARTINE, of Dorchester, Mass., assignor to Himself and R. H. EMERSON, of Lynnfield Centre, Mass.—*Improvement in Lamps.*—Patent dated May 20, 1862.—This invention consists in attaching to the lamp a tube of sheet metal, of somewhat greater diameter than the wick tube, and extending above it, so as to encircle the lower part of the flame for the purpose of assisting, by the heat which it retains, in consuming the smoke and gases; the device being designed to be applied to kerosene lamps without a chimney.

Claim.—The tube C, open at both its top and bottom, its lower end being at or near the top of the wick tube, and its upper end projecting above the wick, the whole constructed, arranged, and operating substantially in the manner and for the purpose specified.

No. 35,350.—J. M. MOSS, of Waverly, Iowa, assignor to Himself and E. H. WILLIAMS, of Clermont, Iowa.—*Improvement in Pans for Evaporating Saccharine Juices.*—Patent dated May 20, 1862.—This invention consists in so constructing the flue and pans in which the evaporation is completed that the opposite sides of the pans may be alternately raised and lowered, by which means the sirup may be constantly exposed in thin films to the air during the process of evaporation. In connexion with an arrangement of shafts is a series of geared wheels, to which are attached cranks or eccentrics made to operate slides, for the purpose of raising and lowering the sides or ends of the part in which the evaporation is completed more or less rapidly, according to the heat of the fire. The pans and operating machinery are so constructed and arranged that either of the parts in which the evaporation is completed may be left at rest, or one end or side alone may be operated.

Claim.—First, the construction of an evaporator so that the opposite sides or ends of the pan or pans may be raised and lowered alternately at the will of the operator, thereby thoroughly stirring the contents of the pan or pans, and cooling the bottom or bottoms thereof.

Second, the construction of an evaporator with pans or a pan that one side or end of which may be raised and lowered more or less rapidly, at the will of the operator.

Third, the construction of an evaporator with a series of pans, in which the finishing pan, or the pans in which the evaporation is completed, are raised and lowered in the manner set forth and described.

No. 35,351.—JOHN POWER, of Boston, and A. J. BAILEY, of Charlestown, Mass., assignors to PETER HOLMES, of Charlestown, Mass.—*Improved Machine for Cutting Cork Stoppers for Bottles and other Vessels.*—Patent dated May 20, 1862.—This invention consists in the employment of a reciprocating knife, in connexion with a rotary mandrel, arranged in such a manner that the mandrel will have a continuous rotary motion in one and the same direction imparted to it by the reciprocating movement of the knife, and the latter, during its movement, be automatically adjusted so as to rough off the cork during its movement in one direction, and give the finishing cut during the other movement in the opposite direction, thus causing the cork to be cut by a single knife at one operation.

Claim.—First, the combination of the reciprocating cutter L and rotating mandrel C, when arranged substantially as shown, so that the latter will have a continuous rotary motion imparted to it in one and the same direction by the reciprocating movement of the cutter, for the purpose set forth.

Second, the cap K of slide I, with the knife L and spirally grooved shafts J J attached, in combination with the sliding rack O, pinions N N, and pins *h h′*, arranged substantially as shown, for elevating and depressing the knife L, for the purpose specified.

No. 35,352.—OSMOND REED, of Paris, Mich., assignor to Himself and A. D. CHESEBRO, of the same place.—*Improved Hay Rigging.*—Patent dated May 20, 1862.—Attached to the body of the wagon is a series of arms *a* projecting over the sides, to which arms are pivoted other arms *e* in such a manner as to be readily adjusted angularly with the projecting arms *a*. The ends of the outer arms *e* are provided with hooks for the purpose of holding ropes upon the load. When not required for use, the outer arms may be folded upon the inner arms.

Claim.—First, the wooden or iron arms, constructed in the form substantially as and for the purposes described.

Second, the adjustable joint at the end of the projecting arms, for the purposes described.

Third, the vertical arm with the hook or ring at the top, for the purposes described.

No. 35,353.—JOSEPH RUSCH, of New York, N. Y., assignor to Himself and JOSEPH LUX, of the same place.—*Improvement in Attaching Armor Plates to Vessels.*—Patent dated May

20, 1862.—Upon the ordinary planking of the vessel is placed an additional planking, over which the plates are secured by means of a clamp bevelled at its rear end and notched at its forward end to fit into recesses in the plates, the clamp being fastened by a screw entering its rear portion, so that the gravitating or dead weight of the armor plating rests principally upon the outer planking, while the strain on the screws is comparatively light.

Claim.—The combination of the additional planking or bed B B, bolt C, continuous clamp D, and grooved armor plate E E, all constructed and applied in the manner and for the purposes shown and described.

No. 35,354.—J. M. SEYMOUR, of Boston, Mass, assignor to E. H. ASHCROFT, of the same place.—*Improvement in Gas Check for Breech-loading Fire-arms.*—Patent dated May 20, 1862.—The breech plug tapers down at its front end to a sharp or bevelled edge, and abuts against a shoulder made in the barrel. The external surface of the breech plug is curved lengthwise so as to admit of a space between the breech plug and the internal surface of its socket for the purpose of allowing the breech plug to be expanded laterally by the force of the explosion, and at the same time causing it to be elongated a little so as to be forced against the shoulder or into the angular space of the front part of the breech plug socket, the object being to produce a gas-tight joint between the breech plug and its seat.

Claim.—The space *a* and the shoulder *d*, arranged and combined with the expansive breech plug and its socket, substantially in manner and so as to enable the said breech plug to operate as specified.

No. 35,355.—W. C. VOSBURGH and W. A. LUDDEN, of Brooklyn, N. Y.—*Improvement in the Means of Attaching India-rubber to Pencils.*—Patent dated May 20, 1862.—This invention consists in the employment of semi-cylindrical clamps and a ring or rings to bind the clamps upon both the pencil and the rubber, so that the rubber can be projected more or less from the clamps, by which means the rubber is readily applied to the pencil and a new piece substituted when necessary.

Claim.—The employment of the semi-cylindrical clamps *b b*, formed as specified, and a ring or rings *d*, in combination with the section of India-rubber *c*, and the pencil or penhandle *a*, for the purposes as set forth.

No. 35,356.—HENRY KELLOGG, of New Haven, Conn.—*Improvement in Breech-loading Fire-arms.*—Patent dated May 20, 1862.—This invention consists in the employment of a pawl or catch for holding the barrel of the arm in close connexion with the breech for discharge, and so arranged in combination with the trigger that the arm cannot be discharged until the barrel is securely fastened to the stock, whence it may be released again for loading. A hollow punch is so arranged that, in the act of closing the breech, (a charged cartridge having been previously inserted,) the said punch will be forced through the end of the cartridge, and the hollow space through the punch connecting with the cap tube will allow the free passage of the flame from the detonating cap through the said hollow punch to the powder contained in the cartridge for the purpose of ignition. Underneath, and moving parallel with the barrel, is a movable spindle, to which is attached a cross-head working in slots in the stock. To the spindle is fixed a spring catch, the point of which, when the barrel is closed, will pass under the rim of the cartridge to remove the case from the barrel after the discharge, or the cartridge without discharging if required.

Claim.—First, the combination and arrangement of the pawl or catch D with the trigger F, operating in the manner and for the purpose substantially as set forth.

Second, the combination and arrangement of the spindle H, cross-head K, and slots L, in the manner and for the purpose substantially as set forth.

Third, the spring catch *f* in combination with the spindle H, cross-head K, and slots L, in the manner and for the purpose substantially as described.

No. 35,357.—SAMUEL BARLOW, of Stakehill, Middleton, England.—*Improvement in Apparatus for Bleaching and Cleaning Textile Fabrics.*—Patent dated May 27, 1862.—Patented in England, July 23, 1853.—This apparatus consists of two closed metallic vessels termed "kiers," which are connected with each other by pipes, forming communication from the top of each to the bottom of the other, and with provision by which steam of considerable pressure can be admitted alternately to the top of either "kier," so that fluid admitted into the top of one kier can be expelled therefrom by steam pressure forcing the fluid through the material contained in this kier into the top of the other; and by stopping the supply of steam to the kier into which it was first admitted for the purpose above named, and by admitting it to the other kier which contains the fluid, it may be forced back through the material contained in the said kier to the top of that one into which the fluid was first admitted. Within and at the bottom of each kier is a plate perforated at its edge, and so shaped as to leave a space between it and the bottom of the kier. From this plate extends upwardly a perforated pipe, which causes the liquid to be discharged within the bulk of the material to be cleansed in the kiers.

Claim.—The combination of closed kiers, so arranged that, by direct pressure of steam within said kiers, bleaching or cleansing liquid can be forced interchangeably from one to

the other, and through the textile material contained in one or both kiers, substantially as described, by which the goods or materials are subjected to the action of bleaching liquid and of steam, alternately, for the purpose specified.

Also, the combination of a perforated pipe or pipes, or distributor or distributors, with a plate perforated at its outer edge, when arranged within a kier so as to admit cleansing liquid through the said perforated pipe or pipes within the bulk of the pack of goods, and to discharge said liquid from said goods through said plate.

No. 35,358.—PETER BAUER, of Newark, N. J.—*Improvement in Skates.*—Patent dated May 27, 1862.—This invention consists in the employment of two lugs or supports attached to one end of the toe strap, in combination with a sliding clasp attached to one end, and catching over suitable pins or projections secured to the other end of the toe strap. Motion is imparted to the sliding clasp in dovetailed guides by means of a screw, which tightens the toe strap, the lugs firmly supporting both ends of the screw, and preventing it from bending.

Claim.—The clasp E, consisting of a dovetailed guide *i*, with two lugs *j k*, in combination with the slide *g* and screw *f*, as and for the purpose specified.

No. 35,359.—ANDREW BLACK, of New York, N. Y.—*Improved Machine for Making Mould Candles.*—Patent dated May 27, 1862.—This machine consists of a horizontal rotating table divided radially to its centre into any number of equal sections, each one of which has secured to it a rack for the reception of the moulds, and at one side of or in front of which is placed a series of spools. From these spools and through a perforated board the wick is supplied to the moulds when the latter are brought in proper position by the rotation of the table. The moulds are divided vertically through their centre for the reception of the wicks and removal of the candles, clamps being used to receive the wicks from the spools for their introduction to the moulds, and to retain them in the moulds before and during the process of pouring the tallow therein.

Claim.—First, the combination of a horizontally rotating mould table and a series of wick spools E E, arranged in a stationary rack or stand D, substantially as specified.

Second, the combination with the horizontally rotating mould table and the series of wick spools E E of a perforated wick board H, and a system of wick clamps G G, substantially as specified.

Third, the employment for moulding candles of divided moulds, constructed to operate substantially as described.

Fourth, the arrangement of the moulds to slide, substantially as described, on horizontal racks C C, curved by a horizontally rotating table.

No. 35,360.—GILBERT BROOKS and WILLIAM OGDEN, of Waverly, N. Y., assignors to Themselves, WILLIAM BROOKS, of Waverly, N. Y., and C. C. BROOKS, of Athens, N. Y.—*Improvement in Grain Sieves.*—Patent dated May 27, 1862.—This device is designed to be applied to a common fanning mill for the purpose of separating wheat from oats. The nature of the invention is explained by the claim.

Claim.—A compound sieve, composed of a succession of sieve plates B C D, one over another, and each having imperforated, perforated, and imperforated elevations alternately, and the imperforated and perforated divisions of the several sieve plates following in succession below one another, substantially as and for the purpose specified.

No. 35,361.—GARDNER CHILSON, of Boston, Mass.—*Improved Broiling Apparatus.*—Patent dated May 27, 1862.—From the rear part of the gridiron projects downwards a plate or heat intercepter, behind which is an opening or escape passage communicating with the interior of the stove, and leading from a cover or case placed over and surrounding the gridiron. At the rear part of and extending across the gridiron is also placed a plate or guard to keep the steak from overlapping the opening or escape passage.

Claim.—The combination and arrangement of the gridiron A, the cover or case D, the intercepting plate B, and the escape passage C.

Also, the arrangement and combination of the guard E with the gridiron A, and its case D provided with an opening C, and the intercepting plate B, as described.

No. 35,362.—CHARLES CHINNOCK, of Brooklyn, N. Y.—*Improved Corkscrew.*—Patent dated May 27, 1862.—The shank of the screw slides freely in the frame, and, as the crank is turned, the screw enters the cork until the shoulder of the crank rests upon the frame. By continuing to turn the crank, the rotary motion of the screw causes the cork to rise upon the same, and the cork is thus drawn from the bottle.

Claim.—The combination of the frame *a* with the screw *b* and shoulder *c*, substantially as and for the purpose specified.

No. 35,363.—C. T. CLOSE, of New York, N. Y.—*Improvement in the Manufacture of Lamps.*—Patent dated May 27, 1862.—This invention consists in forming the base and stem of the lamp in one or more parts, so as to clasp the bottom part of the glass globe or vessel which contains the oil, the parts being secured by means of screws or rivets.

Claim.—The combination of the globe or vessel 1, and base 2 2 2, constructed and arranged substantially as set forth.

No. 35,364.—EDWARD COX, of Covington, Ky.—*Improved Defensive Armor Plates.*—Patent dated May 27, 1862.—The object of this invention is to fit together and combine the marginal portions of the several plates by means of tongues and grooves, whereby they are so locked as to hold each other, both longitudinally and vertically, and the necessity of using plates of very large size is obviated.

Claim.—Having the plates constructed with grooves and tongues *a b*, fitting together in the peculiar manner shown and described, so that the plates will be locked together both horizontally and vertically, all as set forth.

No. 35,365.—W. V. DABOLL, of Cranston, R. I.—*Improvement in Street Sweeping Machines.*—Patent dated May 27, 1862.—This invention relates to the construction of the brush cylinder, so as to provide for the wear and replacement of the brush material. The brush cylinder is composed of two cast-iron hubs secured upon each end of the shaft. From these hubs project a number of radial arms upon which the brushes are adjusted, two opposite arms in each hub holding one brush by passing through the ends of the same. The brushes are held in proper position by means of spiral springs and a sliding collar upon each arm. By moving the said collars towards the ends of the bars, the brushes are set out from the centre and made available until worn out. The brush cylinder is raised from the friction driving rollers by means of a bent lever connected by a cross-bar to a hand lever, and held in an elevated position by a hook and catch.

Claim.—First, the combination of the shaft *k*, the hubs *h h*, the radial arms *f f f*, the springs *s s s*, the collars *n n*, with the brushes I I I, substantially as described, for the purpose specified.

Second, in combination with the brush cylinder, as arranged, the levers B and T, with suitable connexions, in combination with the hook V, or an equivalent fastening, operating substantially as described for the purpose specified.

No. 35,366.—PERRY DICKSON, of Utica, Minn.—*Improved Water Wheel.*—Patent dated May 27, 1862.—The water wheel, which is placed loosely on the shaft, is formed of a circular bottom plate having buckets attached permanently to its upper surface, near the edge. These buckets are curved, so as to receive supplemental buckets, which are allowed to slide freely in and out of the permanent buckets, and are connected with the shaft by means of levers and a collar in such a manner as to be self-adjusting, and made to open and close, so that the issues or discharge orifices of the wheel will always be proportioned in area to the power required of the wheel, thereby avoiding a useless expenditure of water when the wheel is running and driving machinery requiring less than its maximum power.

Claim.—A water wheel fitted loosely on its shaft A, and connected therewith by springs, and provided with adjustable buckets *c*, connected with the shaft by levers B′ and collar C, or equivalent mechanism, all arranged to operate as and for the purpose set forth.

No. 35,367.—HENRY DUNPHY, of New York, N. Y.—*Improvement in Cloth-plaiting Machine.*—Patent dated May 27, 1862.—Upon a suitable bed piece are arranged holders which freely slide in grooves in the bed. The holders are made with a mortise lengthwise for receiving and locking the blades or folders, which latter consist of a series of metal blades with rounded edges, and separated by a piece of metal. At one side of the bed is fastened an inclined bar, to which is pivoted a smoothing bar for flattening and smoothing the folds after they are drawn through the folders.

Claim.—First, combining with movable holders B B a series of blades or folders *a a a*, separated from each other the desired distance by the piece *b b b* for folding cloth into plaits, substantially as set forth and specified.

Second, in combination with the folders *a*, separators *b*, and movable holder B, the ironing bar D, for flattening and smoothing the folds after they are passed through the folders, substantially as described and specified.

Third, the holders B B for locking up the folders *a* and separators *b*, constructed and operating substantially as set forth and specified.

No. 35,368.—SAMUEL EHRMAN, of Mount Joy, Pa.—*Improvement in Shutter Fastenings.*—Patent dated May 27, 1862.—This invention consists in inserting in a window or shutter frame a casing, at the lower part of which is hinged a pawl in a pivot box. Upon the shutter is placed a guard plate having a projecting point upon which the pawl rests when the shutter is opened, by which means the shutter is effectually secured in an open position. A groove and slot are provided for the reception of the guard plate when the shutter is closed.

Claim.—The combination of the casing B B′ with its pivot box C; groove F, and slot E, and hinged pawl A, together with the guard plate D, when these several parts are combined and arranged substantially in the manner and for the purpose specified.

No. 35,369.—A. H. FRENCH, of Pittsfield, Ill.—*Improvement in Water Elevators.*—Patent dated May 27, 1862.—This invention consists in the employment of a flat or square linked chain for keeping the buckets from turning as they are elevated, in connexion with buckets provided with valves opening inwards upon the bottom so that the water will readily enter as the buckets are lowered into it. At the lower edge of an opening in the curb are hinged two troughs which hang vertically when not in use. These troughs are provided with bails, which are caught in hooks upon the buckets as the latter are raised, which bring the troughs into an inclined position so as to receive and carry off the water, the latter being caused to escape at the same time by the opening of the valves in the bottom of the buckets.

Claim.—The flat or square linked chain E, the grooved pulley C, carrying stop pins *b b*, buckets D D′, with hinged valves in their bottoms, and hooks *h h* on their sides, and the hinged troughs G G′, with their pivoted bails *g g′*, all arranged and combined as and for the purpose set forth.

No. 35,370.—WILLIAM FULTON, of Cranberry, N. J.—*Improvement in Coal Oil Burners.*—Patent dated May 27, 1862.—This invention relates to an improvement upon a lamp patented to the said Fulton, August 3, 1858, and it consists in using, in connexion with the burner described in the said patent, one or more impinging plates formed so as to cause a quantity of cold air to come in contact with the wick tube, as it rises to the slot in the cone, for the purpose of keeping the wick tube cool and promoting capillary attraction, the top of the wick tube being concave to the corners so as to spread the flame. Around a slot in the upper part of the cone is placed a gauze wire, and at the lower edges of the slot two or more holes are made for preventing the heat from passing down the cone, and also the flame from being extinguished as the lamp is carried around.

Claim.—First, the combination of gauze wire *m*, as shown in Fig. 7, with holes K, as shown in Fig. 1 and Fig. 5, or their equivalents.

Second, the combination of holes K, as shown in Fig. 1 and Fig. 5, with the gauze wire or perforated plate L, as shown in Fig. 3, or their equivalents.

Third, the combination of the impinger D with holes K, shown in Fig. 1 and Fig. 5, and the gauze wire or perforated plate L, as shown in Fig. 3, the whole being arranged substantially as and for the purpose set forth.

No. 35,371.—C. P. GOSS, of St. Johnsbury, Vt.—*Improved Cultivator and Potato Digger.*—Patent dated May 27, 1862.—The nature of this invention will be understood from the claim, its object being to dig into soil containing potatoes and raise it and them upward, and to break up the soil so as to separate the potatoes from it; the machine being also capable of being used as a cultivator for preparing ground for general farming purposes.

Claim.—The combination and arrangement of the single scoop and the rotary breaker, the driving wheels, their shaft, and machinery for rotating the breaker, the whole being substantially as specified.

Also, the combination and arrangement of the scoop and rotary breaker with a separate frame A, and two bars N N extending from the axle of the driving wheels and arranged with respect to one another, and provided with elevating and depressing mechanism, as specified.

Also, the combination of mechanism for simultaneously elevating and depressing the scoop and the breaker, and adjusting the point of the breaker relatively to the ground, the same consisting of the cranked lever S, the hand lever T, the crooked connexion bar U, the arm V and its slotted bar W, and set screw *m*, the whole being applied to the main frame A and the auxiliary bars N N of the machine and to the scoop shaft, substantially as and so as to operate as described.

Also, not only the application of the knife or cutter to the scoop in such manner that the angle of declination of the said knife may be varied relatively to the scoop, but the application of a supporting chain, or its equivalent, to the knife and the main frame of the machine and to support the upper end of the knife, as set forth.

No. 35,372.—RALPH GROW, of Galesburg, Ill.—*Improved Benzole Soap.*—Patent dated May 27, 1862.—The nature of this invention is explained by the claim, the use of benzole being designed to remove grease spots, paint, &c., from cloth or the skin.

Claim.—The employment of benzole when used in the manufacture of soap, substantially as specified.

No. 35,373.—G. O. GUERNSEY, of Cornwall, Vt.—*Improvement in Watch Escapements* - Patent dated May 27, 1862.—This invention consists in the employment of two balance wheels, carried by the same driving power, but oscillating in opposite directions, for the purpose of counteracting the effect of any sudden jar upon the watch or time-piece. The jar or sudden shock which accelerates the motion of one wheel will consequently retard that of the other, so that the motion of the works will not be disturbed.

Claim.—The combination with a cylinder watch of the mechanism described for operating two balance wheels which shall oscillate alike, but in opposite directions.

No. 35,374.—GEORGE HEATH, of Little Falls, N. Y.—*Improvement in Wrought-iron Bridges.*—Patent dated May 27, 1862.—The straining beams of the bridge are composed of wrought-iron plates, having vertical plates or webs secured centrally to their under sides by angle irons. The braces are of V-shaped form, and are constructed similarly to the straining beams with which they are connected by rivets. The lower parts of each brace are connected by a horizontal plate, each of said parts terminating in a thimble through which, and the horizontal plates, the chords of the bridge pass. Extending from and below the straining beams are rods, the lower ends of which terminate in eyes through which the chords also pass. The flooring timbers are supported upon needle beams, which consist of vertical metal plates having an angle iron at their upper and lower edges, which form recesses or chambers at each side to receive the flooring timbers.

Claim.—First, the combination of the diagonal double or forked braces B, straining beams A, vertical rods E, and chords C, substantially as and for the purpose set forth.

Second, constructing the straining beams A and braces B of wrought metal plates and angle irons connected together by rivets, substantially as and for the purpose specified.

Third, securing the lower ends of the braces B and vertical rods E to the chords C by means of the thimbles *j* and lock nuts D; but this is only claimed when used with the peculiar arrangement of the rods E, braces B, and straining beams A, as described.

Fourth, the needle beams F, constructed as shown, when used in combination with the chords C and applied thereto, as set forth.

No. 35,375.—H. A. HOUGHTON, of Lyme, N. H.—*Improved Clothes Dryer.*—Patent dated May 27, 1862.—This invention consists in making the hub in the form of a prismatic block or box, having an arm socket arranged upon each of its vertical sides. Each socket is provided with a buttress or brace-bearer to receive one of the arms, so arranged as to be capable of being turned upward vertically, and so as to occupy a small space. Each arm is provided with a metallic brace which, with its bearer, serves to maintain the arm in its lowest portion under the contractile strain of the lines, and to prevent the arms from being thrown upward by the action of the wind.

Claim.—The prismatic hub, as made, with its arm sockets on the same, and brace buttresses, constructed and arranged substantially as specified.

Also, in combination with the hub so made, and with the arms applied to it as described, the series of braces applied to the arms respectively and substantially in manner and so as to operate as described.

No. 35,376.—CASPAR JAGY, of New York, N. Y.—*Improvement in Locks.*—Patent dated May 27, 1862.—A metallic plate, formed as shown in the engraving, is firmly secured transversely to the bolt near its centre for the purpose of balancing the weight and imparting an evenness and ease of motion to the parts of the lock. Connected to the frame is one end of a lever, the other end fitting between two pins upon the side plate. When the key is inserted and the spindle turned, the frame is moved upwards and the end of the lever, with its slide and plate, press upon the back of the key and adjust the wards by pressing down against them, so that after the key is inserted the bolts may be moved by simply turning the knob without touching the key.

Claim.—First, connecting the plate C, to which side-bolts may be attached, to the main bolt between the spindle and the wards, as and for the purpose specified.

Second, adjusting the wards by means of the spindle through the instrumentality of the lever E, the slide F, and the key, substantially as set forth.

Third, the combination of the key with the wards and plate F, when arranged and constructed in the manner and for the purpose set forth.

No. 35,377.—FREDERIC KETTLER, of Milwaukie, Wis.—*Improved Heel for Boots and Shoes.*—Patent dated May 27, 1862.—This invention consists of a metallic casing provided with teeth on its upper side for the purpose of fastening it to the boot or shoe. Within the case is a filling of gutta-percha forming the tread. In the lower part of the casing is an additional piece of sheet iron, so arranged as to form a space in which may be placed gutta-percha or other suitable substance.

Claim.—A heel composed of an iron casing constructed with the teeth, as described, in combination with a filling in whole, or only in the tread, with gutta-percha.

Also, the combination of the casing, constructed as described, with a covering up to the line of the teeth of gutta-percha and a filling of the same or other material, in the manner described, and the angle B in combination with the casing, constructed as described.

No. 35,378.—P. L. KREUTER, of Bloomington, Ill.—*Improved Piston Packing.*—Patent dated May 27, 1862.—This invention consists in the arrangement of spring valves and guides in combination with apertures in the piston head and follower, in such a manner that the apertures admitting the steam or other fluid from the cylinder into the piston are simultaneously closed on reversing the piston, so that the steam or other fluid can effectually be employed to produce a tight packing. On the inside of the ordinary main packing rings of the cylinder is also arranged an additional packing ring provided with a toothed expansion

rack and with a spring plate, in such a manner that by the action of the steam or other fluid the inner packing ring is expanded, and the crevice between the outer or inner packing rings is effectually closed, and by means of the spring plate, the steam or other fluid is prevented from finding its way in between the inner and outer rings.

Claim.—First, the arrangement of the spring valves *g g'* and guides *e* in combination with the apertures *f f'* in the piston head and follower, as and for the purpose shown and described.

Second, the arrangement of the protecting plate *j* in combination with the packing rings F and E, as and for the purpose set forth.

Third, the toothed rack *h* and tooth *i* on the ends of the packing ring F, as and for the purpose specified.

No. 35,379.—G. B. MALLETTE, of Milford, N. Y.—*Improved Washing Machine.*—Patent dated May 27, 1862.—This invention consists in the combination of a suction pump with a tub or vat to receive the suds and clothes provided with a rack or other means of supporting the clothes, so as to leave a chamber at the bottom of the tub with which the pump communicates by means of a pipe or pipes, through which latter the suds or water is forced by the action of the pump, and poured again upon the clothing from the spout of the pump, thus keeping up a continuous circuit through the clothes until they are sufficiently cleansed. Above the clothes is arranged a rack and screw for the purpose of expressing the water retained by the clothes after the vat has been emptied, the drying being completed by rarefying and exhausting the air by means of the operation of the pump, causing currents of air to be passed through the fabrics cleansed.

Claim.—The combination of the exhaust or suction pump B with a suitable box or vat A and loose rack E, or its equivalent, for washing the clothes without pressure, arranged and operating substantially as set forth.

Also, the combination of the exhaust pump B with the pressure rack J, or its equivalent, operating in the box A for drying the clothes under pressure, the same device answering for both purposes when the press J is applied and the pump made to discharge its water outside of the box, substantially as shown and described.

No. 35,380.—EDWARD R. MCCABE, of Rochester, Iowa.—*Improvement in Breech-loading Ordnance.*—Patent dated May 27, 1862.—This invention consists in fitting the chamber of a breech-loading cannon with a tube of steel or other tenacious metal termed an internal reinforce, the interior of which is much smaller than the calibre of the gun, and the length of which is sufficient to enable it to contain the charge, the object of the tube being both to strengthen the gun and to reduce the amount of the area of the breech that is exposed to the force of the explosion. The breech is composed of two strong plates or blocks, arranged one behind the other, and connected by screws in such a manner as to permit a slight movement toward and from each other. To each side of the gun near the rear is secured by a hinge joint, one of two dovetail cheek pieces, having each three dovetails, by means of which the breech is securely locked and tightened up. Within a socket is the priming fitted to work easily back and forth, and the priming tube is provided with a plunger, by means of which the priming is exploded. The cannon is designed for the use of gun-cotton in discharging.

Claim.—First, fitting the chamber of a breech-loading gun with a removable tube B of the character described, and termed an internal reinforce, for the purpose specified.

Second, the breech composed of two plates or blocks C D, combined with each other and with the gun by means of the dovetail cheek piece F F and screw G, applied and operating substantially as and for the purpose specified.

Third, the priming tube H and plunger I applied in combination with each other and with the breech, substantially as specified.

No. 35,381.—A. MCGUFFIE, of Rochester, N. Y.—*Improvement in Truss Bridges.*—Patent dated May 27, 1862.—This invention will be understood by reference to the claim and engraving.

Claim.—The truss composed of the arch sections B, with their shoes I I to rest on the abutments or piers, the chords A A and F F, posts C C, and angle braces D D, the whole arranged and combined substantially as and for the purpose specified.

No. 35,382.—R. M. MERRILL, of Chicago, Ill.—*Improved Lantern Lamp.*—Patent dated May 27, 1862.—This invention consists in the application of one or more air passages to the lantern lamp in such a manner as to allow air to enter at the bottom of the lamp and escape close to and below the flame. The upper end of the tube is covered with a conical wire gauze cap to check the current of air through the tube when the lantern is suddenly lowered, the object being to prevent the flame from being extinguished by a sudden movement of the lantern.

Claim.—The application of one or more air passages through a lantern lamp and its bottom, substantially as described and for the purpose specified.

Also, the application of one or more air passages through a lantern lamp and its bottom, substantially as described and for the purpose specified, in combination with an air current checker, for the purpose set forth.

No. 35,383.—O. F. MORRILL, of Chelsea, Mass.—*Improvement in Apparatus for Vaporizing and Burning Liquid Hydrocarbons.*—Patent dated May 27, 1862.—This invention is explained by the claim and engraving. The apparatus is designed to obviate the difficulty experienced in similar devices in which wick or heat conductors are used.

Claim.—An aero-vapor burner as constructed, with the fluid vaporizing conduit arranged to extend across or over the same and through the chimney, and from thence to pass down alongside of and enter the air and vapor-mixing chamber, substantially as described.

Also, the combination of the reservoir and its conduit, provided with a regulating or stopcock, as described, with the aero-vapor burning in such manner that the fluid to be vaporized shall be caused by the action of gravity to pass through the stopcock and the vaporizing tube and across or over the foraminous cap of the burner, in order that the fluid may be heated or vaporized by the flame of the mixed air and vapor applied directly to the conduit, as set forth.

No. 35,384.—J. A. MOWIS, of Neversink, N. Y.—*Improvement in Wagons.*—Patent dated May 27, 1862.—This invention consists in attaching to the under side of a wagon body, curved supports which are attached at their centres to slats or bars of wood or steel extending from the front to the rear axles, the slats acting as springs to the body of the wagon.

Claim.—This substitute for the common elliptic spring buggy, a body the outline of whose ball is the arc of a circle confined upon horizontal longitudinal spring bars, as set forth.

No. 35,385.—L. N. MUIR and A. J. KLINE, of Jersey Shore, Pa.—*Improved Washing Machine.*—Patent dated May 27, 1862.—This invention consists in the employment of a double cranked iron shaft passing transversely through double-slotted arms suspended from a head or cross-piece fitted loosely so as to move up and down in slotted stationary uprights secured upon the outside of the box and which supports the shaft, the cranks on the shaft imparting an easy and rapid rocking motion to the washing board which is joined to the slotted arms. The pressure of the washing board is regulated by means of a spring lever hinged to one end of the box underneath, and operated by a handle at the other end, the lever being attached near its centre to bars connecting with the head or cross-piece in the slotted uprights.

Claim.—The arrangement and combination of the double-cranked shaft D, double-slotted arms C, double-sliding bars F, double-slotted uprights E, head or cross-piece H, and spring lever G, the whole constructed and operated in the manner described and set forth.

No. 35,386.—HIRAM NASH, of Lockport, N. Y.—*Improvement in Water Elevators.*—Patent dated May 27, 1862.—This invention consists in the employment of a windlass having an enlarged central portion, on each side of which are portions of smaller diameter for receiving the opposite ends of a cord or chain. In the enlarged portion is a hole through which passes a rope having secured to it a cross-bar to which the bucket is connected by means of bail rods, for the purpose of throwing the bucket outward when the contents are to be discharged. The water escapes from the bottom of the bucket through a valve which is actuated at the proper time by means of an arm attached to the cross-bar and operating a connecting rod which is jointed to the valve.

Claim.—First, the windlass, having an enlarged central portion H, or its equivalent, with smaller portions K K on each side thereof for the ends of the cord or chain to wind on, when the same is used in connexion with a cord or chain L, extending through and adjustable in said central portion, and a cross-bar M, to which the ends of the cord or chain are attached, the whole arranged, combined, and operating substantially as described.

Second, in combination with the enlarged central portion H of the windlass, or its equivalent, the cross-bar M and bucket N, whereby the latter is thrown outward when raised to discharge its water, substantially as set forth.

Third, in combination with the enlarged portion H of the windlass, or its equivalent, the cross-bar M, provided with an arm Q, the connecting rod R and valve P, whereby the said valve is opened at the proper time to discharge the water from the bucket, substantially as specified.

Fourth, providing the upper end of the connecting rod B, connecting the valve P with the arm Q, in an elongated loop *k* passing over a bearing *h* in the end of the arm, whereby not only is the valve raised at the proper time in discharging the water, but also when the bucket is lowered in the well the valve is allowed to open freely to admit the ingress of the water, the whole arranged and operating substantially in the manner and for the purpose specified.

No. 35,387.—SAMUEL NOWLAN, of New York, N. Y.—*Improvement in Rice Cleaning, Hulling and Pearling Machine.*—Patent dated May 27, 1862.—Below the hopper is arranged a series of wire beds inclined in opposite directions to each other, so that the rice will fall from one to the other. Above each wire bed is placed a frame containing a number of stone slabs or plates of chilled cast-iron, the chilled surfaces being opposite to the wire surfaces, between which two surfaces the rice is made to pass. The frames containing the slabs or plates are connected by means of rods, and a reciprocating motion is imparted to them. After being hulled the rice is conducted to a stationary conical screen or pearling box, through the centre of which passes a shaft provided with a number of dashers or blades to which a reciprocating motion is given, by means of which the rice is freed from its inner cuticle.

Claim.—First, the combination with stationary and elastic wire beds of the

No. 35,388.—JOHN RICHARDS, of Columbus, Ohio.—*Improvement in Small-fire Kilns*

Claim.—First, the combination with stationary and elastic wire beds of the reciprocating cast-iron plates or stone slabs, substantially in the manner and for the purpose described.

Second, the combination with a stationary conical screen, constructed as described, of a revolving shaft and inclined dashers or blades, the whole operating together substantially as set forth.

No. 35,388.—F. B. PIERCE, of Brockport, Ill.—*Improvement in Pumps.*—Patent dated May 27, 1862.—The pistons are each provided with three packing pieces of brass or other soft metal, viz., a face piece and two end pieces, all of which are fitted into deep grooves in the piston. The inner edges of the end pieces are inclined to correspond with the edges of the face pieces, which are also inclined, thus acting as a wedge, so that the face piece may be readily adjusted and the wear compensated for, the adjustment being effected by means of set screws passing through the face plate and bearing against the bottom of the groove in the piston body. In the side of the piston slot is fitted a packing consisting of a strip of brass or other soft metal with a flange on one side or on both sides, or without flanges on its sides, its back being grooved for the reception of a wedge piece. The grooves are inclined to correspond with the face of the wedge piece, which latter is moved longitudinally by means of a screw passing through a tapped hole in one end of the piston drum.

Claim.—First, the construction of the piston packing pieces J and K K, with oblique surfaces *i i* and *h h*, fitting together substantially as described, whereby the piece J in being set out is caused to act like a wedge upon K K and set them out also, as set forth.

Second, in combination with the foregoing the tenons *e e*, constructed and arranged substantially as and for the purpose specified.

Third, the setting out of the pieces J by means of set screws *j j*, applied and operating in the manner specified.

Fourth, the combination of the abutment and piston slot packing pieces H and N, or either of them, with the wedge pieces R P and screws *u p*, applied and operating substantially as and for the purpose specified.

Fifth, the packing pieces H and N, with flanges *s t r*, substantially as and for the purpose set forth.

No. 35,389.—G. P. REED, of Roxbury, Mass.—*Improvement in Watch Escapements.*—Patent dated May 27, 1862.—This invention consists in the combination of a circular segment detent and a detaining and impulse pallet with a vibrating lever, and either two-toothed wheels or one wheel having two sets of teeth, the whole being applied to the balance, so as to operate together and with such balance.

Claim.—The arrangement and combination of the segmental detent *f*, and a detaining and impulse pallet *e*, with the vibratory lever B, and a scape wheel A, constructed as described, the whole being applied to the balance by means and so as to operate therewith and together, substantially as explained.

No. 35,390.—JOHN RICHARDS, of Columbus, Ohio.—*Improvement in Guide and Support for Scroll Saws.*—Patent dated May 27, 1862.—Instead of using a sash, the lower end of the saw is fastened to the upper end of a stock or slide of the pitman by a set screw, its upper portion being disconnected above the table, but supported and guided by means of two parallel bars and an angular plate. The bars have a lateral adjustment to accommodate saws of different thicknesses, and they are designed to keep the saw in a true vertical line while the back plate supports the saw against the strain of the stuff on the teeth. The bars and plate are fastened to the lower end of a sliding strip or guard piece fitted in a groove of a suspended stud of the building.

Claim.—The guide bars *a a*, and the back plate *b*, in connexion with the sliding guard strip A, the same constituting a combined guide, guard, and support for the top of a scroll saw, and operating substantially as described.

No. 35,391.—JOHN RICHARDS, of Columbus, Ohio.—*Improved Scroll Saw Stocks.*—Patent dated May 27, 1862.—This invention consists of a tubular guiding stock which admits the upper end of the pitman into it and allows the pitman to deflect or bend within its lower portion, the said stock constituting a part of the length of the pitman without interfering with its flexibility or rendering the length too great, and also serving as a firm lower support and guide to the saw blade. The saw blade is fastened into the socket-head of the stock by means of a split collapsible pin and set screw, so that the blade may be set to any desired angle or turned in any position for adjustment. The pitman is fastened within the stock and to a socketed head-piece by means of a nut and bolt.

Claim.—First, a guiding stock and pitman, combined and operating substantially in the manner and for the purpose described.

Second, the combination of a split pin and set screw, or its equivalent, with a scroll saw blade and the upper end of a pitman, substantially as and for the purpose described.

Third, the combination of the socketed head-piece, pitman, screw bolt and nut, substantially as and for the purpose described.

No. 35,392.—JOHN RICHARDS, of Columbus, Ohio.—*Improvement in Scroll Saw Mills.*—Patent dated May 27, 1862.—This invention consists in the combination of a solid supporting structure, tubular saw stock and pitman, and a guard with supporting and guide plates, for the purpose of obviating the difficulties caused by the trembling and vibration produced by the rapid speed with which the saw is necessarily driven.

Claim.—First, the tubular saw stock E and flexible pitman D, in combination with the guard, support, and guide J *n o p*, substantially as and for the purpose described.

Second, the tubular saw stock E and flexible pitman D, in combination with the guard, support, and guide J *n o p*, arranged with a single solid structure A, and operating in the manner and for the purpose set forth.

No. 35,393.—M. T. RIDOUT, of Milwaukie, Wis.—*Improvement in Butter Moulds.*—Patent dated May 27, 1862.—This device is constructed of a block of wood, in the bottom of which is a circular cavity within which works a piston. Passing through the centre of the piston rod is a horizontal metallic cross-rod, the ends of which play freely in slots in the uprights. Upon the outer face of one of the uprights are a series of jointed holders arranged at proper intervals, and, in connexion with pins on the other side of the same, serve to arrest the upward motion of the piston so as to leave space in the cavity for certain definite, ascertained weights of butter. Upon the lower edge of the cavity are fitted three curved knife-blades so connected with handles that by turning the latter, the blades will cut off the butter smoothly and even with the surface of the mould.

Claim.—The use of a piston and piston rod in connexion with the cavity of a butter mould of any desired size or shape, when the said piston is arrested in its movement at determined intervals, substantially in the manner and for the purpose set forth.

Also, when a piston and piston rod are combined with a butter mould, as set forth, the combination therewith of one or more knife-blades moving horizontally over the bottom of the cavity in said mould, substantially in the manner and for the purpose set forth.

No. 35,394.—ELISHA ROBBINS, of Milford, Mass.—*Improvement in Looms.*—Patent dated May 27, 1862.—The object of this invention is to provide a means of arresting the shuttle at or near the termination of its course, and under any sudden increase of speed of the loom, so as to prevent the cop in the shuttle from being thrown off the spindle, which is effected by combining with the binder, and so as to extend beyond its outer end or into shuttle box, a stopping spring jaw curved as shown in the engraving. To the opposite side of the shuttle box is affixed an auxiliary spring jaw. Upon the top of the shuttle box are arranged two adjustable and parallel guides or straight bars, each being provided with transverse slots and set screws, in order that the bars may be adjusted so as to have their edges parallel, and either in range of the race beam or at such an obtuse angle therewith as will cause the picker to direct the shuttle to properly run across the beam while the shuttle may be in the act of being expelled from the shuttle box. The picker staff near its lower end is made to rest in a forked radius arm extended from a socket piece which projects from the lay sword. A string connected at one end to the sword, and at the other to a strap fastened to the lower part of the picker staff, serves to maintain the staff in connexion with the radius arm, and the latter in connexion with its socket piece.

Claim.—The application and arrangement of the spring stop jaw *c* with the binder, and so as to extend into the shuttle box, and operate with the picker or its staff, substantially as specified.

Also, the combination and arrangement of the auxiliary spring jaw *d* with the spring jaw *c*, when arranged with and extended from the binder, as specified.

Also, the combination and arrangement of the adjustable guides *e e*, with the shuttle box, the picker and its staff, as explained, when the said picker is made substantially as described.

Also, the combination and arrangement of the forked radius arm F, the socket piece G, and the spring H, as applied to the picker staff and lay, and so as to operate therewith, substantially as specified.

No. 35,395.—ELISHA ROBBINS, of Hopedale, Mass.—*Improvement in Picker Staff for Looms.*—Patent dated May 27, 1862.—Projecting from the lower part of the sword of the lay is a curved arm or supporter, upon each side of which, near the end, is affixed an ear or cammed bearer, which constitutes a shoulder or abutment for the lower part of the picker staff, to maintain its foot in the proper place on the supporter during the throw of a shuttle. A long metallic foot rests upon the top of the supporter, and is provided with curved shoulders or caps projecting upwards from it, so as to prevent the foot from slipping off the supporter during the retraction of the picker staff.

Claim.—The arrangement of the cammed bearers *a a*, their shoulders or caps *b b*, and the picker staff with the foot D and supporting arm C, as described.

No. 35,396.—H. A. ROE, of Madison, Ohio.—*Improvement in Valves to Heaters for Cheese Vats.*—Patent dated May 27, 1862.—The nature of this invention will be understood from the claim, the object being to dispense with the use of a stuffing box and other parts difficult for a farmer to keep in order, and to insure a simple arrangement of the valve apparatus.

Claim.—First, constructing and operating valves in the heaters to cheese vats with the

valve lever below the valve bar, and within the heater, one end of said lever being connected to the valve bar, and the other with a rod working through an open tube, substantially as and for the purpose specified.

Second, operating the valves in heaters to cheese vats with a valve rod working through an open tube on the heater, as and for the purpose specified.

Third, making the tube, for the escape of steam, separate from and fastening it to the heater with a yoke and bolt, for the purpose specified.

No 35,397.—M. and S. SHAWVER, of Bellefontaine, Ohio.—*Improvement in Harvesters.*—Patent dated May 27, 1862.—This invention consists of an arrangement of parts, by means of which the raking device may be readily operated by the driver or attendant, and also be capable of being readily adjusted, so that the sickle, which is attached as usual to the platform, may be made to cut higher or lower, as desired.

Claim.—First the drum L, provided with a spiral spring L′, and connected to the bar H, which is provided with a spring stop *s* and rack I, in connexion with the adjustable shaft O, provided with the pinion N, and operated as shown, and the treadles R S, arranged for actuating, respectively, the shaft O and spring stop *s*, substantially as and for the purpose set forth.

Second, the manner of securing the bar E to the main frame A, as shown and described, to wit, by means of the pivot *d*, slotted plate F, and set screw *e*, whereby the platform, and consequently the sickle, may be readily adjusted higher or lower, as described.

No. 35,398.—D. H. SHEARER, of West Grove, and CYRUS HAYNES, of Centerville, Iowa.—*Improved Washing Machine.*—Patent dated May 27, 1862.—This invention consists in the employment of two concave washboards and a convex rubber, composed of inclined slats, with intervening apertures, so that dirt may pass through as it is rubbed from the clothes. Between the washboards, at their lower ends, are three rollers, under which is a dirt chamber for the reception of the dirty suds.

Claim.—The combination and arrangement of the inclined slats *a a* on the concave washboards G G and rubber C, with intervening apertures, rollers H H, and dirt chamber K, substantially as and for the purpose specified.

No. 35,399.—H. A. SMEAD and C. H. HUNTLY, of Pavilion, N. Y.—*Improvement in Car Couplings.*—Patent dated May 27, 1862.—The bumper bar is composed of a top and bottom plate and two jaws, one of which is firmly bolted to the top and bottom plates, while the other is pivoted to the said plates, and forms one side of the bumper bar. The bumper head is made removable, and slides over the end of the coupling bar. Between the movable and stationary bars is a chamber, in which are placed a sliding spring block, made concave in front to receive a disk. From this disk is cut a segment, into which fits the counterpart of the head of the shackle bar, so arranged that when a car runs off the track the shackle bar is at once released, and the cars consequently uncoupled. An arrangement of devices is also employed for effecting the uncoupling and automatic coupling of the bar.

Claim.—A removable bumper head or buffer C, when made entire, and which is removed and replaced by sliding it on or off the end of the coupling bar in a horizontal direction, substantially as described.

Second, the imperfect disk G, which is made perfect by the insertion of a shackle bar formed with a solid double convex head, in combination with jaws having concave parts *h h′*, forming circles concentric with that of the disk G, as and for the purpose set forth.

Third, the combination of the disk G and solid double convex-headed shackle bar with the sliding spring block F, as described.

Fourth, the means described for coupling and uncoupling the shackle bar, consisting of the spring stop R, and foot S, projection T, lever N, pin M, and curved sliding bar L, as specified.

No. 35,400.—C. G. SMITH, of Mount Vernon, N. Y.—*Improved Composition for Waterproofing Cloth, Leather, &c.*—Patent dated May 27, 1862.—The nature of this invention is explained by the claim.

Claim.—The described composition, consisting of linseed oil, white wax, spermaceti, litharge, and burgundy pitch, mixed together in the manner and about in the proportion specified.

No. 35,401.—L. A. SPRAGUE, of Brooklyn, N. Y.—*Improvement in Buckles.*—Patent dated May 27, 1862.—This invention consists in the employment of a lever, which is fitted loosely on the axis of the buckle frame, and is constructed of a plate or strip of metal doubled or bent, one part over the other, and enclosing the axis of the frame, the end of the strap being between the folded parts and secured by rivets. The free end of the strap is firmly pinched between the front end of the frame and lever.

Claim.—Constructing the lever of a strip or plate of metal folded back upon itself, or doubled and enclosing the axis of the frame upon which the lever turns or works, as set forth.

No. 35,402.—G. W. THOMPSON, of New York, N. Y.—*Improvement in Self-regulating Gas Burners.*—Patent dated May 27, 1862.—This invention consists in constructing automatic regulators with an air-chamber communicating with the outside air over the elastic diaphragm, so as to lessen the diameter of the diaphragm and effect an equable flow of gas under all variations of pressure from the main pipe.

Claim.—The air-chamber 1 and entrance 2, in combination with an elastic diaphragm operating a conical valve, the whole being constructed and operating substantially as set forth, and for the purpose of regulating the flow of gas at the burner.

No. 35,403.—BENJAMIN TOBIAS, of Washington, Ill.—*Improvement in Ditching Machines.*—Patent dated May 27, 1862.—Secured to the main beam by means of the standard and brace is a shoe, from the centre of which rises a central inclined cutter. The sides of the ditch are formed by two inclined flaring cutters, the lower ends of which are secured to the shoe, and the upper ends to a cross-bar upon the beam. The dirt is thrown off by means of inclined planes and deflecting plates, so as to be piled up on each side of the ditch.

Claim.—The combination of the deflecting plates L and bar C with the inclines J, cutters G H H, standard D, and shoe F, when the said parts are arranged and operate together, as shown and described.

No. 35,404.—A. C. VAUGHAN, of Bedford, Pa.—*Improvement in Revolving Fire-arms.*—Patent dated May 27, 1862.—This invention consists of a double-barrelled fire-arm having two hammers actuated in succession by a single trigger, and a revolving breech with two concentric series of chambers.

Claim.—First, a revolving breech E having two concentric circles of chambers provided, respectively, with axial nipples F′ and oblique nipples F2, for the objects stated.

Second, a double barrel and a revolving breech having two concentric series of chambers, in combination with two hammers actuated in succession by a single trigger, and one of them employed to discharge an outer and the other an inner chamber, substantially as set forth.

No. 35,405.—S. M. WASHBURN, of Poughkeepsie, N. Y.—*Improvement in Water Elevators.*—Patent dated May 27, 1862.—The crank socket through which the shaft passes is provided with two bevelled notches cut opposite each other in the inner edge. The brake wheel D has two arms or shafts placed in grooves in the main shaft under a ratchet wheel band, with the ends extending to the bevel notches of the crank socket, so that, as the latter is turned to the right, the bevel notches wedge against the bevel ends of the arms of the brake wheel, pressing the brake wheel against the drum which winds up the chain or rope. On reversing the motion of the crank the rope may be unwound fast or slowly at the will of the operator.

Claim.—The combination and arrangement of the crank socket C with the brake wheel D, for the purpose substantially as specified.

No. 35,406.—J. M. WHITING, of Providence, R. I.—*Improvement in Machines for Threading Wood Screws.*—Patent dated May 27, 1862.—This invention consists in the employment of a face plate having a series of studs fixed in its face at equal distances from each other and from its centre, for the purpose of carrying the tool or cutter from the head towards the point of the screw blank to make the repeated cuts in forming the thread. The several studs of the series are made alternately larger and smaller in diameter with respect to each other, in the order in which they are placed, so that the cutter will be alternately advanced and delayed, and thereby made to cut first upon one side of the thread and then upon the other. In connexion with the above is a series of adjustable cams projecting from the periphery of a rotating disk equal in number to the studs upon the face plate, and acting, through the medium of a sliding former, to press the point of the tool or cutter against the blank to be threaded simultaneously with the action of the studs in carrying the tool forward to make the successive cuts in forming the thread. A vertically sliding carrier is also employed, which is made to ascend in the midst of a quantity of blanks contained in a dish or hopper whose bottom has a central inclination by repeated strokes or motions, and in so doing to lift one or more blanks from the mass and deposit the same between the prongs of a fork suspended by the head, from which they descend by an inclined railway to a horizontal position near the mouth of the nipper, to which they are fed by any well-known means.

Claim.—First, the face plate F and the series of studs *h h i i* in combination with the dog *n*, or its equivalent, upon the tool post, arranged and operating substantially as described for the purpose specified.

Second, a series of studs which are alternately larger *h h* and smaller *i i* in diameter, in the order in which they are arranged, substantially as described for the purpose specified.

Third, the combination and arrangement of the cams *t t*, &c., the studs *h i*, &c., and the springs *g* and 9, for the purpose of effecting a connexion and a disconnexion at the proper time between the threading tool holder and the device which reciprocates the same, substantially as described.

Fourth, the sliding carrier N arranged with the hopper M, in combination with the hinged prongs *s s* upon the railway, and operating substantially as described for the purpose specified.

No. 35,407.—J. F. WINSLOW, of Troy, N. Y.—*Improved Armor Plates for Vessels.*—Patent dated May 27, 1862.—This invention consists in constructing the plates with rebates, projections, and corresponding indentations in such a manner as to enable them to be securely fastened to each other and to the sides of the vessel without exposing the heads of the fastening bolts upon the outside surface of the armor.

Claim.—The combination of one or more series of armor plates with rebates, projections, and corresponding indentations, constructed and applied substantially as described.

Also, the recess *m* for the bolt heads *g*, in combination with the flange *a* of the armor plate A riveted over and upon the plank C of the next adjoining armor plate A, substantially as described.

No. 35,408.—A. J. AMBLER, of Milwaukie, Wis., assignor to Himself, R. N. AMBLER, and WARRICK MARTIN, of the same place.—*Improvement in Railroad Car Brakes.*—Patent dated May 27, 1862.—This invention consists in the employment of two friction wheels in connexion with the driving wheels of a locomotive, and a shaft provided with universal joints so arranged with levers and connecting rods as to be under the control of and operated by the engineer, and be also capable of being operated from the cars by brakemen—the cars of an entire train being capable of being all operated simultaneously by the engineer, or any one of them separately by the brakemen. By means of an index, which is caused to traverse over a properly graduated dial plate, the precise position of the brakes at any point of their movement may be indicated, so as to serve as a guide to the engineer in adjusting and operating the same.

Claim.—First, the burr or friction wheels F G, arranged in relation with each other, and the driving wheel C of the locomotive, as shown, and the shaft E″ K, provided with universal joints *b e*, and connected by the band I, or gearing in combination with the screw L on shaft K, and the lever or treadle N connected with the shafts K and O, all arranged to operate with the tumbling rod S, substantially as and for the purpose set forth.

Second, the indicator formed of the index *b′* traversing over a properly graduated dial plate *a′* and operated from the tumbling rod S, as shown, or in any equivalent way, to indicate the position or state of the brakes, as described.

Third, the combination and arrangement of the levers C′ J′ O′, chains H′ K′, and rods I′ N′, as shown, for transmitting the power to the brake bars L′ L′ P′ R′.

Fourth, the adjustable shaft S′, provided with the screw T′, arranged with the segment slide U′ or its equivalent, and connected with the shaft *r′* of the hand wheel Y, in combination with the worm wheel *q′* on the tumbling rod V, and the shaft D′ provided with the worm wheel *h′* and connected with the lever C′, as shown, substantially as and for the purpose set forth.

No. 35,409.—F. W. ARMSTRONG, of New York, N. Y., assignor to Himself, S. G. MILLIGAN, and J. S. GREEN, jr., of Elizabeth, N. J.—*Improved Composition for Journal Boxes.*—Patent dated May 27, 1862.—This invention is explained by the claim.

Claim.—The wool flock concentrated solution of alum, gum, or mucilage, and plaster of Paris, or the equivalent substances named, when combined substantially in the proportion and for the purpose specified.

No. 35,410.—ALFRED BRIDGES, of Newton, Mass, assignor to Himself and ALBERT BRIDGES, of New York, N. Y.—*Improvement in Car Trucks.*—Patent dated May 27, 1862.—This invention consists in applying to the swinging bolster beam, springs so arranged that, whilst they permit the necessary swing of the beam laterally in the truck, they will relieve the concussion given to the car body by suddenly arresting the movement of the truck along the rails, as when the brakes are applied or any obstruction met with on the track.

Claim.—The application of springs H, or their equivalents, on each side of the bolster beam C, substantially in the manner and for the purpose specified.

No. 35,411.—C. S. BULKLEY, of New York, N. Y., assignor to Himself and J. C. BOYD, of the same place.—*Improvement in Apparatus for Compressing Musket Balls.*—Patent dated May 27, 1862.—Upon a shaft mounted in a suitable framing is placed a stout crank and a cam. Directly below the crank and on the centre of a casing is mounted a stout lever. Within the said casing are dies fixed in slides which are free to move longitudinally therein and are united by means of knuckle joints and toggles, the outer ends of which are united to similar joints to the ends of the aforesaid lever, so that a rocking or tilting motion shall open and close the dies which are mounted respectively with the toggles. The pellets forming the material for the bullets are dropped singly from a tube into a cavity at the proper time where they are retained until the right moment, when they are dropped through a hole in the top of the casing, and compressed by the action of the punch into the dies within, the operation being effected by means of two levers operated in one direction by the motion of the punch, and in the other by a spring or springs, thus causing the release of a single pellet at each descent of the punch sufficiently early to allow it ample time to descend, when it is checked until the right movement for its entrance into the dies.

Claim.—First, the employment in a bullet compressing machine of the lever B and cam *a*, with the toggles M N arranged relatively thereto, substantially as described and shown for the purpose set forth.

Second, releasing a single pellet at each descent of the compressing punch in a bullet compressing machine by means of the check J, or its equivalent, operating substanially in the manner set forth.

No. 35,412.—M. L. CALLENDER, of New York, N. Y., and N. W. NORTHRUP, of Greene, N. Y., assignors to Themselves, and C. H. WELLING, of New York, N. Y.—*Improved Defensive Armor for Ships.*—Patent dated May 27, 1862.—This invention consists in the construction of plates of iron provided with broad flanges or ribs for the purpose of strengthening them, and with a drop flange or lap at one edge for receiving a plate with corresponding edges to which it is to be riveted. Concave plates and tubes are also used in forming the shield or plating.

Claim.—First, the use of long metallic plates of defensive armor ribbed, as described, in combination with the circular stringers, by which they are attached substantially as and for the purpose described.

Second, the manufacture and use of tubes placed between the surfaces of concave plates of stringers of iron, together with, and the mode of fastening them for mailing vessels, and other military purposes, as described.

Third, the combination of the flange and rib plates, the concave plates and connecting tubes, with the intermediate plate and springs, to make a shot or shell-proof mailing for war ships, and other military purposes, substantially as described.

Fourth, the use of metallic tubes for mailing war vessels, when constructed and applied substantially as described.

No. 35,413.—WESLEY SAWYER, of Lowell, Mass.—*Improvement in Fire Escapes.*—Patent dated May 27, 1862.—This invention consists in the arrangement of one or more struts with a series of telescopic tubes, combined with a truck and swivel platform, cars or baskets, and a series of windlasses, in such a manner that the tubes can be extended upwards and elevate the platform to any desired part of the building. Two baskets or cars are also so arranged with each other and with a revolving fan, that the velocity of the descending basket is checked by the action of the fan, one basket rising while the other descends.

Claim.—The combination and arrangement of one or more struts or tormentors *s* with a series of tubes C C′ C″, supported by pivots *c*, and made to extend in the manner of a telescope, and combined with the truck A, swivel platform H, and rising and falling baskets I, constructed and operating substantially as and for the purpose set forth.

Also the combination of the rising and falling baskets I, chain *n*, and revolving fan J, constructed and operating in the manner and for the purpose described.

No. 35,414.—JOHN CAREY, of Brooklyn, N. Y., assignor to S. A. SMITH, of Smithtown, N. Y.—*Improvement in Metallic Bedsteads.*—Patent dated May 27, 1862.—This invention is explained by the claim and engraving.

Claim.—As an improved article of manufacture, a metallic bedstead having its posts A, formed of sheet metal, bent in tubular form, and its end rails B, formed of wrought-iron angle plates, the two posts and end rail at each end of the bedstead being connected by castings C shrunk or cast on them, as described, and the castings provided with dovetail grooves to receive the tenons of the cast metal side rails D, which are formed of two parts connected by dovetail joints with castings E, which are shrunk or cast on tubular sheet metal legs F, substantially as set forth.

Also, in combination with the parts constructed as above described, the longitudinal extension rods G G, attached to the wrought metal end pieces B B, and provided with screw joints *e*, as and for the purpose specified.

No. 35,415.—W. COGGESHALL, of Finley, Ohio, assignor to Himself and W. T. COGGESHALL, of the same place.—*Improvement in Ploughs.*—Patent dated May 27, 1862.—To the front part of the land side which extends upward in a curved form above the mould board, is pivoted a rod having its forward end bent downward and forked so as to fit over the upper edge of the beam. The rear end of the beam is curved and attached at its lower end to the lower part of the land side. Near the forward end of the beam is a series of holes, into one of which the forked end of the above-named rod may be bolted so that the lines of the draught may be varied as desired, to regulate the depth of furrow.

Claim.—The combination of the adjustable rod E and adjustable beam F, arranged and applied to the plough as and for the purpose set forth.

No. 35,416.—H. K. GARDNER, of York, Pa., assignor to Himself and A. J. GLOSSBRENNER, of the same place.—*Improvement in Pneumatic Telegraphs.*—Patent dated May 27, 1862.—This invention consists in operating a recording instrument at one end of a line by means of a current of compressed air passing through a tube and controlled by a transmitting

instrument at the other end of the line. In connexion with the two rollers which give motion to the paper upon which the message is recorded, is used a pen secured in a bracket projecting from the frame, the pen sliding freely endwise in its bearings, in order that its point may touch the paper when required. The pen is actuated by a plunger, which also plays freely endwise in its bearings in a cylinder, and is actuated by the direct impulse of a current of air passing through the tube which connects the transmitting with the recording instruments. An aperture in the cylinder near its lower part permits the air to escape and causes the plunger to drop the moment the current ceases.

Claim.—The combination of a recording instrument, operated by means of a current of compressed air, with a transmitting instrument which controls said current, for the purpose of transmitting intelligence, substantially in the manner described.

Also, the combination of the pen *c* and plunger E, substantially in the manner described for the purpose set forth.

Also, making an aperture *f* in the cylinder F, for the purpose of securing celerity and certainty in the action of the plunger E, substantially as described.

No. 35,417.—LOUIS HARPER, of Brooklyn, N, Y., assignor to W. T. GLIDDEN, of Brookline, Mass.—*Improvement in Fertilizers.*—Patent dated May 27, 1862.—The object of this invention is to resuscitate and restore guanos which have been deprived in a measure of their fertilizing qualities, to their original quality and effectiveness, which is accomplished by re-impregnating them with such ammoniacal and alkaline salts as are a material aid to the growth of the herbaceous part of the plants, and rendering a part of the basic phosphates soluble by converting them by one and the same process into bi-phosphates or super-phosphates.

Claim.—The restoration of phosphated guano, in the manner and by the means substantially as described.

No. 35,418.—JOHN HASKINS, of Roxbury, Mass., assignor to S. P. BLAKE, of Boston, Mass.—*Improvement in Gun-Nipple Protector.*—Patent dated May 27, 1862.—This invention consists in constructing a gun-nipple protector of India-rubber, or any of its compounds, for the purpose of effectually excluding dampness from the nipple, and preventing it from being broken or bruised by the snapping of the hammer.

Claim.—A gun-nipple protector constructed of India-rubber, or any of its compounds, substantially as described and for the objects specified.

No. 35,419.—C. W. HOPKINS, of Norwich, Conn., assignor to Himself, T. K. BACON, and A. E. COBB, of the same place.—*Improvement in Revolving Fire-arms.*—Patent dated May 27, 1862.—The object of this invention is to facilitate the loading of the several chambers without the necessity of taking out the cylinder or removing the frame. Arranged within the frame of the cylinder and fitting close against its front portion is a swinging arm. The cylinder turns freely upon the axis pin, which latter protrudes a short distance through the rear of the cylinder, and is received within a curved slot or bearing provided for it in the recoil shield, so as to allow of the swinging movement of the arm.

Claim.—The employment, in combination with the axis pin E, of the curved slot *c d* and swinging arm F, substantially as and for the purpose shown and described.

No. 35,420,—EDWARD JOSLIN, of Keene, N. H., and D. L. GIBBS, of Norwich, Conn., assignors to C. B. ROGERS & Co., of Norwich. Conn.—*Improvement in Hub Mortising Machines.*—Patent dated May 27, 1862.—This invention consists in providing a convenient thumb lever by which the index pin is drawn from the dial ring by a touch of the thumb when the hand is placed on the wheel to turn the hub for another mortise; also in the use of a sliding piece that raises the spring from notches in the tilting bar that regulates the length of the mortise. The desired angles for the mortise are obtained by adjusting the movable collars on a bar that connects with the bed and passes through a swivel-head, when the bed is tilted either way, in connexion with set screws and stop plates.

Claim.—First, the thumb lever A, when used in combination with the spring *c*, to draw the index pin out of holes in dial ring.

Second, the sliding plate H, on the tilting bar L, when used to raise the spring K, as specified.

Third, the swivel-head, three movable stop plates U U, set screws I I, and adjustable collars R R, when connected with bed W by connecting bar P, for the purpose specified.

No. 35,421.—GEORGE LEACH, of Elmira, N. Y., assignor to Himself and EDMUND BURKE, of Newport, N. H.—*Improvement in Grain Separators.*—Patent dated May 27, 1862.—This invention consists in the employment of a series of screens fitted within a case to which a shake motion is imparted, and which is provided with knocking devices acting upon the bottom of the screens and case, in connexion with a series of blast spouts provided with a self-acting valve, an adjustable gate and refuse receptacle, all so arranged as to separate not only impurities, but different kinds of grain from each other. Within the vibrating box or case is a series of bars placed on shafts extending through the case, so that the bars may be brought into a vertical position and in contact with two screens or with a screen and chute, between which they are

placed, so as to communicate the motion from the screen or chute below them to the one immediately above, for the purpose of cleaning the screens.

Claim.—First, the arrangement of the screens and chutes in the vibrating box or case B, in combination with the spout H, passage I', and knockers L and M, substantially as and for the purpose set forth.

Second, the adjustable bars O, placed in the vibrating box or case B, and arranged with the screens and chutes thereof, substantially as and for the purpose set forth.

Third, the cross blasts formed in the spouts *a' b'*, by means of the openings *c" c' c"*, as described, for the purpose set forth.

Fourth, the combination of the spouts *a a' b' b"* and h with the chamber U, fan P, adjustable gate V, and self-acting valve R, all arranged as shown, in connexion with the box or case B containing the screens and chutes, as and for the purpose specified.

No. 35,422.—WILLIAM LYMAN, jr., Malone, N. Y., assignor to Himself and S. M. WEAD, of the same place.—*Improvement in Cultivators.*—Patent dated May 27, 1862.—In the rear of the plough are attached two long pieces or hoes made adjustable to suit furrows of different widths by means of arms and bolts. Two short hoes are also provided with similar adjustments, and serve to remove the earth and weeds from the hill, while the long hoes restore the earth to the hill in such quantities as may be desirable.

Claim.—The combination with the plough A, and beam D, of the long hoes B B, with their adjusting arms *d d* and short hoes C C, with their adjusting arms *f f*, said parts being constructed and arranged to operate in relation to each other, substantially as shown and described.

No. 35,423.—B. A. MASON, of Newport, R. I., assignor to SARAH J. MASON, of the same place.—*Improvement in Machines for Threading Wood Screws.*—Patent dated May 27, 1862.—This invention consists of a machine for threading wood screws, in which is embodied mechanism for receiving the blanks and conducting them into annular chucks; for carrying the chucked blanks to a threading tool; for carrying the chucked blanks while held in a chuck by the shank, the jaws of the chuck tightening their gripe on the blank in proportion to the impinging force of the cutting tool by reason of the resistance of the cutting tool to the rotation of the blank. Also, mechanism for guiding and directing the thread-cutting tool to cut the screw by a succession of light cuts from the shank to the point of the screw, and mechanism for discharging the finished screw, leaving the chuck in condition for receiving a fresh blank.

Claim.—First, the feeding mechanism, consisting of the intermittently rotating grooved barrel and casing with its slotted ways, in combination with annular chucks and chuck carrier, substantially as described.

Second, the combination of the rotating chuck carrier and a screw-threading tool, operating substantially as described.

Third, the annular chuck in two sections, one containing the radial jaws and forming the journal to work in fixed bearings, and the other which contains the cams, the part by which the rotating motion is communicated to both parts of the chuck, when combined and arranged substantially as described.

Fourth, the annular chuck when constructed and arranged substantially as described, in combination with a screw-cutting tool, so that the gripe of the segment jaws of the chuck are tightened upon the shank of the screw proportionably to the impinging force of the cutting tool, which by reason of its opposition to the rotating of the chuck and blank, causing the two parts of the chuck (one containing the segment jaws, and the other the cams acting on them) to turn on each other for the purpose of tightening the gripe of the chuck upon the blank, substantially as described.

Fifth, in combination with the cutting tool the cam carrier, with its progressive series of graduated cams, when intermittently rotated by the backward motion of the arm of the tool carrier, so as to bring each cam successively to the proper place to guide the tool while performing the operation of threading the screw by successive light cuts, substantially as described.

Sixth, the feeding mechanism, the annular chucks, and their carrier, in combination with the threading mechanism, the whole combined and arranged substantially as described.

No. 35,424.—CHESTER MERRITT, of Rutland, Vt., assignor to Himself and D. D. WHITTAKER, of the same place.—*Improvement in Water Strips for Doors.*—Patent dated May 27, 1862.—This invention is explained by the claim.

Claim.—A weather strip of India-rubber, guarded upon one edge with a thin clasp of metal, which is inserted into a narrow crevice in the edge of the door or window, and having on each side of it a groove capable of receiving it when turned down, the whole being constructed substantially as described.

No. 35,425.—J. P. WORTHING, of Binghamton, N. Y., assignor to NELSON ORCUTT and G. W. GREGORY, of the same place.—*Improved Arrangement of Feathering Floats with Paddle Wheels.*—Patent dated May 27, 1862.—This invention consists in attaching to the axles

of the revolving or loose floats of paddle-wheels a series of cranks, and connecting rods, by means of which the several floats shall be connected in their operation, and caused to enter and leave the water in a vertical position.

Claim.—The specific method of connecting float to float, or bucket to bucket, when to the axles of each float are attached the crank A and the rod B, and when the whole is combined with the interlacing bars C C.

No. 35,426.—JOEL HARRIS, of New Carlisle, Ind.—*Improvement in Bee-Hives.*—Patent dated May 27, 1862.—This invention consists in combining two or more angular chambers with their movable comb frames or frames and honey boxes, so that ready access may be had to either chamber without disturbing the other or its contents, the bottom of each chamber being composed of a single inclined plane for the ready escape of excrementitious matters, worms, &c.

Claim.—The combination of the chambers L L′ with the comb frames E E, and the single inclined plane bottoms D D with the slide *m*, by means of which the communication between the two chambers L L′ can be closed or opened at pleasure, the whole being constructed and arranged in the manner and for the purpose specified.

No. 35,427.—MICHAEL MANN, of Syracuse, N. Y.—*Improved Artificial Fuel.*—Patent dated May 27, 1862.—The ingredients of which this composition consist are coal-dust, flour, coal or wood tar, pitch, rosin, asphaltum or petroleum, plaster, clay, and water, properly prepared and mixed.

Claim.—The composition composed of the ingredients combined as described, and in about the proportions, for the purpose set forth, the same constituting an improved, new, and useful article of manufacture.

No. 35,428.—J. Q. ADAMS, of Highspire, Pa.—*Improvement in Horse Rakes.*—Patent dated June 3, 1862.—This invention consists in the employment of a series of spring plates secured to a roller above the axle, the ends of which plates are attached severally to the rake teeth by means of an eye, so as to allow the teeth to slide freely therein, by which means the teeth are held down when at work, and raised all together when necessary. The roller upon which the springs are secured is provided with a handle which may be operated by the driver.

Claim.—The combination of the spring plates M M with the rake teeth I I, when turning on a separate shaft or axis from said rake teeth, for the double purpose of holding the rake teeth down more firmly, and of raising them from the ground when required, substantially as specified.

No. 35 429.—J. S. ATTERBURY, JAMES REDDICK, and T. B. ATTERBURY, of Pittsburg, Pa.—*Improvement in the Manufacture of Hollow Glassware in Bas-relief.*—Patent dated June 3, 1862.—The nature of this invention will be understood from the claim.

Claim.—A new manufacture, consisting of glassware with open illuminated relief work on its surface, substantially as described.

No. 35,430.—J. S. ATTERBURY, JAMES REDDICK, and T. B. ATTERBURY, of Pittsburg, Pa.—*Improvement in the Manufacture of Hollow Glassware.*—Patent dated June 3, 1862.—This invention consists in forming figures or ornaments upon a piece of transparent glass, by cutting or pressing the same, and afterwards pressing or imbedding upon this piece a portion of glass equally transparent and made plastic by heat, so that the grooves and cavities of the figures, &c., are completely filled with glass and the two portions become incorporated, leaving the outer surfaces smooth, the appearances of the figures or ornaments remaining as distinct as before the plastic glass was applied.

Claim.—A new manufacture of glassware, which, while it shall have smooth surfaces both without and within, and while its internal structure is entirely solid without any open spaces or interstices left therein, shall present the appearance of cut or pressed glass, substantially as and for the purpose above described.

No. 35,431.—GEORGE BAILEY, of Buffalo, N. Y.—*Improved Baggage Check.*—Patent dated June 3, 1862.—This invention consists in the employment of a tag composed of a sheet of brass turned over at its edges to form grooves into which is slipped a card, having the number and names of the places printed thereon, a duplicate of which is given to the passenger as his check; the tag to be attached to the article of baggage by a leather strap.

Claim.—The described method of checking baggage, that is to say, by attaching to the article a ticket holder, and inserting therein a card which is the counterpart of the one given to the traveller, substantially in the manner and for the purpose set forth.

No. 35,432.—C. F. BARAGER, of Candor, N. Y.—*Improved Reversible Plough.*—Patent dated June 3, 1862.—This invention consists in combining, with a right and left hand plough, a movable or swinging section secured to an oblique spindle provided with a pinion

on its upper end, operated by a gear wheel in such a manner that the movable section may be turned and made to correspond with either of the fixed sections of the mould board as the beam is turned for a right or left hand plough.

Claim.—The combination of the movable or swinging section of mould board I, spindle J, gear wheels K *c*, and pivoted beam E, with the fixed sections of mould board H H′, when arranged to operate in the manner and for the purpose set forth.

No. 35,433.—W. B. BEMENT, of Philadelphia, Pa.—*Improvement in Stands for Machines.*—Patent dated June 3, 1862.—This invention consists in constructing the supporting structures or frames of machinery, with a cabinet or tool receptacle formed therein, by casting them together in one entire piece.

Claim.—The main supporting structure of machines, having a cabinet or safe tool receptacle formed therein, when cast in one entire piece, essentially in the manner and for the purposes set forth and described.

No. 35,434.—W. B. BROADWELL, of Springfield, Ill.—*Improvement in Corn Ploughs.*—Patent dated June 3, 1862.—The plough is formed of two inclined bars or standards attached to two horizontal beams. To one of the standards is secured, by means of metal clamps, a bar which connects the two parts of the plough together. Between the two parts, and secured to the connecting bar, is a fender or guard made in two parts, and composed of a series of parallel rods placed in a flaring position for the purpose of preventing the clods of earth from falling upon the plants by the action of the shears as they pass on each side.

Claim.—In combination with the bar G and clamps H H the fender or guard I, applied to the beams A A and bar G, as and for the purpose specified.

No. 35,435.—S. B. CONOVER, of New York, N. Y.—*Improvement in Potato Diggers.*—Patent dated June 3, 1862.—This invention consists in constructing the rotary screen of two spiral conveyors placed on a common axis or shaft and open at one side, the screen having a suitable shake motion imparted to it, so that the weeds, trash, and earth are separated from the potatoes as the latter are conveyed by the screen into the tilting receptacles at the rear of the machine.

Claim.—First, the combined rotary screen, conveyor, and weed separator, formed of two spiral parts J J, connected to a common axis or shaft I and provided with openings *a a*, substantially as and for the purpose set forth.

Second, the scoop or share M and rotary screen, conveyor, and weed separator, having a shake motion as described, in combination with the tilting receivers P Q, all arranged for joint operation as and for the purpose specified.

No. 35,436.—J. W. COOMBS, of Mount Vernon, N. Y.—*Improvement in Coal Scuttles.*—Patent dated June 3, 1862.—This invention consists in the arrangement of a movable sieve in the interior of a coal scuttle, in combination with an ash-box hinged to the bottom of the scuttle, so that the dirt or ashes mixed with the coal can be separated from it, and be passed through the sieve into the ash-box. Upon the upper edge of the scuttle are spring ears provided with two sockets, one to receive the bale, and the other the pivot of the hinged lid, so that the lid can be easily taken off for the purpose of packing the scuttles for transportation. A hinged movable lid is attached to the upper edge of the scuttle in such a manner that the coal can easily pass out as the scuttle is tilted, and the dust be prevented from escaping during the operation of sifting.

Claim.—First, the combination of the scuttle A, hinged ash-box E, shaking sieve D, and handle *j*, all constructed, arranged, and operating in the manner and for the purposes set forth.

Second, the combination with the sieve D and scuttle A of the ring *h*, as and for the purpose specified.

Third, the arrangement of the jointed removable lid C, in combination with the scuttle A, as and for the purpose described.

Fourth, the combination with the hinged lid C and bale B of spring ears *f*, each provided with two sockets *g g*, as and for the purposes specified.

No. 35,437.—L. C. CROWELL, of West Dennis, Mass.—*Improvement in Aerial Machines.*—Patent dated June 3, 1862.—This invention consists in the arrangement of two or more flat sharp-pointed hinged wings capable of being turned to a horizontal or a vertical position, and of one or more rotary hinged propellers, the shafts of which can also be brought to a horizontal or vertical position, or to any desired inclination, in combination with a pyramidal winged steering apparatus or rudder, and with a suitable car, in such a manner that from the said car the motion of the whole machine can be controlled by the position given to the propellers, to the wings, and to the rudder.

Claim.—The arrangement of the hinged wings A, car B, and pyramidal winged steering apparatus or rudder E, in combination with the adjustable hinged propeller C, constructed and operating substantially in the manner and for the purpose shown and described.

No. 35,438.—B. F. FIELD, of Sheboygan Falls, Wis.—*Improvement in Seeding Machines.*—Patent dated June 3, 1862.—Under the grain seed compartment is arranged a grain measuring slide, furnished with openings corresponding in size with those in the bottom of the seed compartment, and attached at one end to a screw fitted to work within a nut in one end of the hopper, so that the measuring slide may be moved to cover more or less the seed openings in the false bottom of the grain compartment to adapt the machine to sow any given quantity of grain to the acre. On the periphery of the thumb nut, which operates the slide, are cogs which mesh into a wheel, on the outer end of whose axis is fixed an index pointing to figures on a dial to indicate the number of bushels sown to the acre. A shut-off slide is arranged under the measuring slides to stop the flow of seed when necessary. Each of the compartments is provided with a stirrer, consisting of a disk of metal of an elliptical form and secured in an oblique position upon a shaft in the hopper, to which disk motion is given by means of a band passing over the hub of the driving wheels.

Claim.—First, the combination of the grain measuring slide G, screw *f*, thumb nut *g*, index *i*, and dial N, with the bottom *a* and shut-off slide I, when arranged in the manner and for the purpose set forth.

Second, the combination of the compartments E F, false bottom *a*, slides G I, tubes J J, and chute *o*, when arranged as described.

Third, the agitators, consisting of elliptically-formed disks of metal *p*, secured in an oblique position on a horizontal shaft *q*, arranged to operate in the manner and for the purpose set forth.

No. 35,439.—D. R. FRASER, of Chicago, Ill.—*Improvement in Piston Packing.*—Patent dated June 3, 1862.—This invention consists in admitting steam upon the outer channelled circumference of the outer or main packing rings, and in an arrangement of two or more valves, two or more sliding seats, and two or more springs, with relation to the piston head and follower and the packing rings. The inner ring is constructed with a channel in its outer circumference, and with a wedge shaped slit or cut having a wedge fitted in it, and also with a steam passage leading from its inner circumference into the channel, the said steam passage being enclosed by a valve chamber. At the base of the piston head is arranged a combined wedge and set bolt in relation to the rings, so that the weight of the piston upon the wedge tends to keep the packing distended and steam-tight. Between the ends of the arms of the piston head and the inner circumference of the packing rings, are interposed sliding spring wedges, so that compensation for wear of the packing rings shall be made as fast as the wear takes place.

Claim.—First, employing through means, substantially as described, the combination of the expanding action and compressing action of steam at one and the same time upon the ring or rings I of a piston, substantially as and for the purposes described.

Second, the arrangement of the valves, their seats, their springs, and their chambers, with relation to the piston head and follower and the packing rings, for the purposes described.

Third, the construction of the ring C, substantially as and for the purpose described.

Fourth, the arrangement and combination of the packing rings C H I, the whole constructed in the manner and for the purpose described.

Fifth, the combination and arrangement of the wedge E, or its equivalent, with the centring bolt or screw D of the piston, substantially in the manner and for the purposes described.

Sixth, the interposition of self-adjusting wedges B, substantially in the manner and for the purposes described.

Seventh, adjusting the packing by means of wedges B applied between it and the arms of the piston head A, whether the wedges be operated automatically or otherwise, for the purpose set forth.

Eighth, the spaces *p*, substantially as and for the purposes set forth.

No. 35,440.—C. H. FROST, of Peekskill, N. Y.—*Improvement in Heaters.*—Patent dated June 3, 1862.—In this heater the fire-pot is corrugated and made in the form of an inverted section of a cone, the corrugations extending from top to bottom and opening into the ash-pit. The fire-pot rests upon a plate forming a part of the upper surface of the ash-pit, and is cast in connexion with the sectional part of the base, and furnished with openings corresponding with the cold air space around the ash-pit.

Claim.—First, the extension of the corrugations of the fire-pot from the top to the bottom, and opening into the ash-pit, substantially as set forth.

Second, the combination of a grate and fire-pot in such a manner as to leave the spaces formed by the corrugations of the fire-pot and rim of the grate open into the ash-pit and free for the passage of air, substantially as set forth.

No. 35,441.—H. N. FRYATT, of Belleville, N. J.—*Improved Centrifugal Machine for Filtering Liquids.*—Patent dated June 3, 1862.—This invention relates to an improvement in the well-known centrifugal machine, having a concentric annular compartment outside of a central chamber which has been used for drying clothes by centrifugal force, and also for separating molasses from the crystals of sugar, so that it may be applied to the purposes of decolorizing saccharine juices and to the rectification of alcoholic liquids, &c. The claim explains the nature of the improvement.

Claim.—Constructing the centrifugal machine for filtering purposes with an annular filtering chamber surrounding a central reception chamber, the said filtering chamber having a closed top and bottom, and its sides being formed of an outer and inner pervious cylinder, with the inside filled with pulverized charcoal, or its equivalent, substantially as and for the purpose set forth.

Also, in combination with the central reception chamber and the annular filtering chamber, the cap extending inward over the reception chamber and the inner cylinder, to form a chamber in which the liquid accumulates before pressing through the filtering chamber, substantially as and for the purpose set forth.

No. 35,442.—I. A. HEALD, of Washington, D. C.—*Improvement in Machines for Making Cigars.*—Patent dated June 3, 1862.—This invention consists, first, in the employment of a series of grooved rollers, the grooves and ridges of which fit into each other by pairs, but gradually lessen in depth from the pair between which the leaf or wrapper is first inserted, to the last pair, when it is passed between smooth rollers; second, in the use of cylindors and cylindrical casings so constructed that the space between the periphery of the cylinder and the inner surface of the casing shall correspond with a cigar of any required shape or size for the purpose of forming the fillings of cigars; third, in the combination of two rolls with a cylinder, the peripheries of all of which correspond to the required shape of a cigar, and are made to revolve at a proper speed and in proper direction to revolve the filling or core at a suitable point on the periphery of the cylinder during the wrapping or finishing process, the bearings of the rolls being in a rock frame, so that they may be thrown off from the cylinder to let the filling between them or the finished cigar fall out; fourth, in the employment of a finger for the purpose of facilitating the wrapping process at that end of the filling around which the wrapper commences to wind, by holding the end of the wrapper upon the filling during its first revolution; fifth, in a revolving sliding shaft provided with a conical aperture of suitable size and shape to admit the pointed end of a cigar, and having a slot the length of said aperture to admit the last end of the wrapper as it is wound around the pointed and enclosed end of the cigar. An apron is provided upon which the wrapper is placed preparatory to its being rolled upon the filling, combined with which is a friction roller for facilitating the insertion of the wrapper, so constructed that the said roller is made to revolve by pressing against a roll, between which two the wrapper passes at a proper time for the finger to catch and hold it, so as to insure its winding around the filling.

Claim.—First, a series of grooved and smooth rollers F F′ G G′, constructed and operating substantially as and for the purpose set forth and described.

Second, the combination of cylinders I I′ and cylindrical castings J J′, constructed and operating substantially as and for the purpose set forth.

Third, the combination of rollers K K′ with the cylinder I′, operating substantially as described and for the purpose set forth.

Fourth, apron L and friction roller *t* in combination with rollers K K′, constructed and operating substantially as set forth.

Fifth, finger *p*, or its equivalent, when operated substantially as described and for the purpose set forth.

Sixth, the revolving sliding shaft N, constructed and operating substantially as and for the purpose specified.

No. 35,443.—EDWARD HEATON, of New Haven, Conn.—*Improvement in Ordnance.*—Patent dated June 3, 1862.—In the breech of the gun is a charge chamber of a nearly spheroidal form, and contracted towards the front to serve as a ball seat so as to fit the rear end of the projectile for the purpose of entirely exploding the charge and prevent the escape of the gases.

Claim.—The construction of the screw breech with the ball seat *d d*, and a charge chamber D, which is contracted at *i i* toward the seat, as and for the purpose shown and described.

No. 35,444.—JACOB HOLBEN, of Allentown, Pa.—*Improvement in Operating Grinding Mills.*—Patent dated June 3, 1862.—This invention consists in the use of sugar or other similar substance for cleaning millstones instead of the usual method of picking the stones.

Claim.—The method specified of cleaning millstones by the use of sugar or other similar substance in cleaning the stones.

No. 35,445.—SAMUEL HOLDSWORTH, of Durham, England.—*Improvement in Looms.*—Patent dated June 3, 1862.—Patented in England May 17, 1860.—This invention relates for the most part to looms for weaving Brussels carpet or other terry or piled fabrics. It does not admit of a brief description.

Claim.—First, the combination of the saddles C, the catch E, the traverse bar F, and instrument G, the switch bar J and the doffer plate *k*, the whole applied and operating substantially as set forth, to insert and withdraw the terry or pile wires in a loom.

Second, the construction of the lever B′, through which the mechanism for inserting and withdrawing the pile or terry wires is actuated, with a curved slot B*, substantially as and for the purpose set forth.

Third, the combination of the pusher H and the instrument N, constitutin

Third, the combination of the pusher H and the instrument N, constituting a means of transferring the wires from the position to which they are withdrawn from the fabric to that from which they are reinserted, substantially as described.

Fourth, the employment of the supporting post N2 of the instrument N as a means of tightening the weft, substantially as specified.

Fifth, the combination for oiling or lubricating the terry or pile wires of a vessel s3, a grooved or channelled bar s, and a sponge s4, the whole applied and operating substantially as set forth.

Sixth, the combination of the picking nipples v' $v2$ attached to the wheel P, the levers P′ P2, the shaft P5, the sectors P3 P9, and the straps P6 P7, connecting the levers with the pickers, when arranged and operating as specified.

Seventh, the combination of parts for operating the tappets, consisting of the separate shaft S, the internal toothed wheel Q, and the pinion Q′, the whole applied and operating substantially as specified.

No. 35,446.—P. N. HORSELEY, of Jersey City, N. J.—*Improvement in Ventilators for Hats.*—Patent dated June 3, 1862.—This invention consists in the arrangement in the interior of a hat or head covering, of a movable frame, one part of which is attached to the hat, while its other part is made to slide in and out in such a manner that, whenever the wearer desires, the hat can be raised from the head and retained in such a position that the air can have access around the head and cause a free ventilation.

Claim.—The air arrangement of the sliding ring C, in combination with the hat or head covering B, and connected to the same by rods *e* and spring sockets *c*, or by other equivalent means, substantially as and for the purpose shown and described.

No. 35,447.—WILLIAM HOWARD, of Flushing, N. Y.—*Improvement in Coal Oil Lamp Chimney.*—Patent dated June 3, 1862.—This invention consists in forming a glass chimney and cone of one piece, the parts being joined at their lower parts, and the chimney part being provided with apertures for the admission of air.

Claim.—As an improved article of manufacture, a chimney and cone made with the bases of the two parts joined together; the cone being placed within the chimney, and the latter being provided with apertures *b* to admit air between the cone and chimney, all as shown and described.

No. 35,448.—A. S. HUDSON, of Sterling, Ill.—*Improved Spring Spur.*—Patent dated June 3, 1862.—This invention consists in the application to a spur, of two curved spring arms bent in such a manner that when they are slipped or sprung over the instep of a boot they will draw the spur up against the heel and retain it firmly in place. Combined with the said spring is a strap or wire which passes under the boot and is provided with two loops to which the pantaloons can be fastened to serve as straps for the same.

Claim.—First, the employment or use of the curved spring arms B in combination with the spur A, substantially in the manner and for the purpose shown and set forth.

Second, the arrangement of the looped wire C passing under the foot, in combination with the curved spring arms B, applied and operating as and for the purpose specified.

No. 35,449.—T. S. HUDSON, of East Cambridge, Mass.—*Improvement in Inkstands.*—Patent dated June 3, 1862.—This invention consists in providing the top of the inkstand with a separate annulus, in combination with a perforated cap and cover, in such a manner as to enable the cover to be revolved within and independently of the annulus upon the cover, and also to be forced down upon the cap by the annulus when secured upon the cap. When the inkstand is in use, the perforations in the cap and cover are brought in juxtaposition; but when closed, the cover is moved around so as to cover the perforation in the cap.

Claim.—An inkstand, as constructed, with the separate annulus *d* combined with the perforated cap *b* and cover *g*, in manner and so as to operate therewith, substantially as described.

No. 35,450.—JACOB JAHRAUS and J. G. BICKEL, of Buffalo, N. Y.—*Improvement in Faucets.*—Patent dated June 3, 1862.—In the nozzle of the faucet is a cylinder which is provided with a piston, and forms a force-pump or syringe. When a glass of beer has been drawn from the faucet, the beer is partially withdrawn by the piston up into the cyliuder, and by means of a spring the piston is forced down, and injects the beer into the glass with sufficient force to cause it to foam and sparkle. In the side of the faucet is a small tube opening against the plug when the faucet is shut, but connecting with a hole drilled to the centre of the plug, and there meeting a vertical hole through the handle of the plug when the faucet is open. A rubber tube connects the tube in the faucet with a vent tube in the top of the cask, so that when the faucet is open a communication will be formed from the air to the inside of the cask, causing the liquor to run freely.

Claim.—First, the combination of a force-pump or syringe with the faucet, when constructed and operating substantially as described.

Second, the formation of the holes *o p* in the key of a faucet with the tubes *n q*, for the purpose of producing a self-acting vent, substantially as described.

No. 35,451.—W. H. JOHNSON, of Springfield, Mass.—*Improved Marine Propeller.*—Patent dated June 3, 1862.—Immediately in the rear of the stern-post is a vertical shaft resting upon a step which projects aft from the keel; to this shaft is attached, by means of a collar and pin, at a short distance above the step, a rigid forked arm, having its forks gradually curved outwards and brought to a point at the extreme end. Between these ends, and at the crotch of the fork, is pivoted to the arm an elastic blade which is free to vibrate horizontally between the legs of the fork, by which means it is allowed a considerable lateral sweep.

Claim.—A propeller for vessels, consisting of a rigid vibrating arm H, to which is pivoted an elastic blade M, substantially as specified.

No. 35,452.—FREDERIC KETTLER, of Milwaukie, Wis.—*Improvement in Rotary Pumps.*—Patent dated June 3, 1862.—In this pump the axle is secured to an inner plate having sections cut out from each side in which the pistons move. The pistons are provided with cog rollers placed between them and the plate for the purpose of easing the motion of the pistons. The abutments of the pistons are secured to the same by means of hinges. The pistons and forward cog-rollers are partially covered by plates. In the upper part of the cylinder is an elevation, which contains a spring that presses against the inner plate to prevent the escape of water. Around the axle is placed a volute spring which serves as a packing. The eduction pipe is provided with a small hole for the escape of water above that point, to prevent it from freezing.

Claim.—First, the combination of cog-rollers D with piston C and plate B, as shown and described.

Second, the abutments E and plates E′ and pistons C, as combined and arranged with the whole apparatus.

Third, the elevation F′, in combination with the spring F, arranged and combined with the apparatus as described.

Fourth, the volute spring G arranged in the manner and for the purpose specified, in combination with the apparatus, forming a packing around the axle A.

Fifth, valve *m*, in combination with the apparatus, in the manner and for the purpose set forth.

No. 35,453.—ARTHUR KINSELLA, of Cascades, Washington Territory.—*Improvement in Aerial Machines.*—Patent dated June 3, 1862.—This invention consists in the employment of a gas generator and condenser, connected to a suitable cylinder by means of pipes provided with stopcocks that are alternately opened and closed by the motion of a crank shaft in combination with fan wheels and discharge pipes passing out at the end of a rocket-shaped balloon, and with a steering gear, in such a manner that by the action of the fan wheels the air is forcibly driven out at the stern of the balloon, and the latter is propelled in the same manner as a rocket.

Claim.—The arrangement of the generator D and condenser E, connecting with the cylinder C by means of pipes *d d′ g g′* and stopcocks *e′ e′ h h′*, operated by crank shafts *f i*, as described, in combination with the fan wheels F F′, tubes G G′, and with the rocket shaped balloon A, the whole being constructed and operating in the manner and for the purpose specified.

No. 35,454.—WILLIAM KOSS, of McGregor, Iowa.—*Improved Trace Fastening.*—Patent dated June 3, 1862.—This invention consists in providing the trace with an adjustable double spring joint trace-plate, in which a revolving loop and rod work, with a shoulder sunk in the plate pieces for shortening or lengthening the traces; the object being to facilitate the adjustment of the trace, to obviate the necessity of cutting the trace when the horse is down, and to admit of instantly detaching the horse from the carriage when necessary, which may be effected by pulling a cord attached to a hook so that the revolving rod is released from its socket.

Claim.—The adjustable trace-fastening, consisting of the double spring plate B, hinged at D, the rod S, and springs F and P, all constructed and arranged as described and set forth.

No. 35,455.—T. S. LAMBERT, of Peekskill, N. Y.—*Improvement in Boilers and Tea kettles.*—Patent dated June 3, 1862.—This invention consists in providing a bail and lug so adapted to each other that the weight of the boiler will cause the lug to sustain the bail at right angles to the upper surface of the boiler when it is inclined toward the spout, as in pouring out its contents, while the bail can readily be turned down when the boiler rests upon its bottom. A cover is also connected to the boiler by means of the same lug in such a manner as to admit of its being easily turned around upon the lug, and at one or more points be raised upon the same and taken off from it and the bail.

Claim.—First, the construction and combination of a lug and bail in such a manner by grooves or pins that the weight of the boiler when inclined in pouring will fasten the two together, substantially as set forth.

Second, the combination of the arm A, figure 3, of the cover with the lug and bail, in the manner substantially as set forth.

No. 35,456.—J. B. LEVERICH, of New York, N. Y.—*Improvement in Cover for Gun Locks.*—Patent dated June 3, 1862.—This invention consists in the employment, for the purpose of protecting the locks of fire-arms, of a cover or sleeve made of India-rubber, or other suitable material, and provided at its ends with elastic bands arranged in such a manner that the ends can be expanded and contracted at pleasure.

Claim.—The employment or use of a cover A, of India-rubber cloth, or other suitable material impervious to water, having in its ends elastic bands *a*, or their equivalent, substantially as described for the purpose of protecting the lock of fire-arms.

No. 35,457.—E. B. MANNING, of Cromwell, Conn.—*Improvement in Tea and Coffee Pots.*—Patent dated June 3, 1862.—The object of this invention is to obviate the objections to the use of Britannia metal incident to its liability to melt at a comparatively low temperature, and it consists in constructing the lower part and bottom of Britannia tea and coffee pots of iron or other metal which will bear a high degree of heat without injury, so that the vessel may have a flat bottom and rest directly upon a range or stove.

Claim.—An improvement in the construction of Britannia pots, by making the lower body and bottom of such vessels of iron or a metal capable of bearing much greater heat than Britannia, substantially as and for the purpose set forth.

No. 35,458.—MORRIS MATTSON, of Boston, Mass.—*Improvement in Douche Baths.*—Patent dated June 3, 1862.—The nature of this invention is explained by the claim, the object being to provide a bath the temperature of which shall be under control, and readily regulated to adapt it to the condition of the patient.

Claim.—A bath apparatus, consisting essentially of two or more tanks or reservoirs containing water of different temperatures, the outlets from which unite in one delivery pipe, and are commanded by a suitable cock or cocks, substantially in the manner specified, for the purpose specified.

No. 35,459.—JOHN MAXHEIMER, of New York, N. Y.—*Improvement in Bird Cages.*—Patent dated June 3, 1862.—This invention is explained by the claim.

Claim.—The arrangement and combination of the cups C with the cage A and sliding doors B, as shown and described, so that the door will rest upon the cups, holding them in place and preventing the waste of seed; also permitting the filling of the cups without their removal; likewise entirely closing the opening when the cups are removed for cleaning, all as set forth.

No. 35,460.—R. S. MERRILL, of Lynn, Mass.—*Improvement in Coal Oil and other Lamps.*—Patent dated June 3, 1862.—This invention consists in combining with a reservoir, which contains the oil to be burned, a tube and burner, the latter being arranged in relation to the reservoir, so that the distance between the burning part of the wick and the surface of the oil shall be maintained by hydrostatic pressure, which shall be constant, or nearly so, for the purpose of supplying the flame with a uniform quantity of oil, the object being to dispense with the mechanical devices specially designed for accomplishing the same purpose.

Claim.—The combination of an oil reservoir and burner, under the arrangement set forth, so that the burning part of the wick shall be constantly supplied with oil, automatically, substantially as described.

No. 35,461.—JACOB MILLER, of Canton, Ohio.—*Improvement in Fanning Mills.*—Patent dated June 3, 1862.—This invention consists in combining with the main shoe and riddle a trough, to which is connected a riddle, so that the latter may be inclined towards either end of the trough, for the purpose of giving the grain a second cleaning as it is carried to the side of the machine for bagging. Combined with the transverse trough and riddle is a pipe or air passage leading from the fan chamber to the trough, so that a blast may be driven through the trough and its screens, to give the grain a second action of air as it passes to the side of the machine.

Claim.—First, in combination with the main shoe and its riddle, the transverse trough and its riddle, for the purpose of giving the grain a second cleaning as it passes to the side of the machine, substantially as described.

Also, in combination with the transverse trough and its riddle, a conducting pipe for introducing a blast into the trough, to give the grain a second action of air as it passes over the transverse riddle, substantially as described.

Also, the so arranging of the riddle or riddles in the trough as that they may be inclined to either side of the machine, for the purpose and substantially in the manner set forth.

No. 35,462.—JACOB MILLER, of Canton, Ohio.—*Improvement in Fanning Mills.*—Patent dated June 3, 1862.—This invention consists in the employment of an auxiliary riddle, or a riddle and shoe placed upon the outside of the fanning mill, and to which the grain is conducted after having been subjected to the operation of the riddle within the case, for the purpose of giving the grain a second cleaning. Leading from the fan blower to the auxiliary shoe or riddle is a pipe for the purpose of conducting air to the said shoe. The auxiliary riddle and air conveyor may be so arranged as to be placed on either side of the fanning mill.

Claim.—First, in combination with the main riddle and shoe, an auxiliary riddle on the side of the fanning mill, to give the grain a second cleaning, substantially as described.

Also, in combination with the auxiliary riddle, a conducting pipe or air passage for introducing a blast to said riddle, substantially as described.

Also, in combination with the main riddle and shoe and the auxiliary riddle, a conveying apparatus for bringing the grain from underneath the main riddle to the auxiliary riddle, substantially as described.

Also, the so constructing of the fanning mill and the auxiliary riddle as that the latter may be used on either side of the machine preferred, substantially as described.

No. 35,463.—JACOB MILLER, of Canton, Ohio.—*Improvement in Fanning Mills.*—Patent dated June 3, 1862.—This invention consists in the arrangement of an upper and lower riddle in the shoe, with a chute board between them and the second blast passage and delivery spout, so that the grain, as it passes through the upper riddle, will be carried back and fall upon the lower riddle, to receive a second action of air from the same blast as it passes to the delivery spout.

Claim.—The arrangement of the riddle C E and conducting board D with the two wind passages and the delivery spout or trough I, for the purpose of subjecting the grain to a double or second current of air to clean it, substantially as described.

No. 35,464.—JONATHAN MOSTELLER, of Lock Haven, Pa.—*Improved Cement for Roofing and for other Purposes.*—Patent dated June 3, 1862.—The ingredients of which this composition consists are sand, gravel, iron-ore clay, common cement, red lead, gum shellac, gas tar, linseed oil, and pitch tar, to which are added yellow ochre, iron ore, and fire-brick clay in quantities and proportions to effect the color desired.

Claim.—The combination of the ingredients mentioned, with the mode and manner of applying and coloring the same, substantially as described and for the purpose set forth.

No. 35,465.—ALVAN MUNSON, of Peterborough, N. H.—*Improvement in Pumps.*—Patent dated June 3, 1862.—This invention consists in the employment of a check or retaining valve in the piston, which latter is bevelled at its lower side, to form a V-shaped edge at the outer end of the plunger. The front part of the valve is provided with a projection, which extends within the body of the pump and projects over a groove or channel made longitudinally in it, by which the water is allowed to escape and pass down the induction pipe for the purpose of preventing the pump from freezing. The handle of the pump is attached to the piston shaft by means of an eye or loop, and on the handle is placed loosely a collar having a semicircular grooved end which fits in the back part of the eye. The face of the collar is provided with projecting teeth fitting in notches in the shaft, the teeth being held in the notches by means of a nut working on a screw thread on the handle, so that the handle may be varied in position on the shaft, as desired.

Claim.—First, having the piston H provided with a V-shaped edge *a** at the outer part of its valve seat, when used in connexion with the groove or channel *b* in the chamber A and the projection *a* of the check valve D, arranged as shown, to admit of the escape of water from the pump by the depressing or forcing down of the piston, as and for the purpose set forth.

Second, connecting or securing the handle K to the shaft G by means of the eye *e*, collar L provided with the teeth *h*, the notches *i* in shaft G, and the nut M, all arranged as shown, whereby the position of the handle K may be changed or varied on the shaft as circumstances may require.

No. 35,466.—G. W. NICHOLS, of Wheatland, Iowa.—*Improvement in Rotary Pumps.*—Patent dated June 3, 1862.—Within a cylinder secured in the well is placed, eccentrically to the first, a second cylinder of smaller diameter, through which extends a sliding piston fitting closely therein, and serving as a valve to the pump. The inner cylinder is revolved by means of a vertical shaft tube, which also serves as the elevating pipe. The piston is provided with two transmitting cavities, respectively, in the ends and opposite sides thereof, into which the water is successively forced, whence it passes through apertures into chambers on the outer side of perforated partitions, which are formed on the inner cylinder, and between which the piston slides, the water then being delivered through apertures up into the exit chamber.

Claim.—The combination of the eccentric inner driving cylinder B, transmitting the water through itself with the outer cylinder A and piston C, substantially as specified.

Also, the sliding piston C, transmitting the water to the cylinder B, in combination with said cylinder B and outer cylinder A, substantially as specified.

Also, the combination of the transmitting cavities *c c* in the piston C with the valve apertures *p p* in the cylinder B, arranged and operating substantially as specified.

Also, the combination of the side chambers *t t* and perforated partitions *b b* in the cylinder B with the piston C, substantially as set forth.

Also, the employment of the revolving driving shaft D as the elevating pipe, in combination with the cylinders A and B, substantially as specified.

Also, the combination of the tubes *l* and *m*, arranged and operating substantially as and for the purpose specified.

No. 35,467.—F. E. OLIVER, of New York, N. Y.—*Improved Combination of Pencil Sleeve and Eraser.*—Patent dated June 3, 1862.—This invention consists in the employment of a sleeve made of an India-rubber compound, which can be used as an eraser, and made to slide upon the pencil, so as to cover and protect the point.

Claim.—As an article of manufacture, the combined sleeve and eraser, constructed to operate substantially in the manner and for the purposes specified.

No. 35,468.—FREDERICK POHLMAN, of Coxsackie, N. Y.—*Improvement in Hay and Straw Cutters* —Patent dated June 3, 1862.—This machine is constructed with a knife operating at one end of a feeding trough, to which knife, motion is given by the combined power of the hand working a lever, and the foot by means of a treadle, at the same time operating a toothed feeder working through a slot in the bottom of the trough. The blade of the toothed feeder is held against the guide by means of a cord and spring. A cord attached to the front end of a spring extending from the rear of and over the machine serves to aid in the return of the cutter and to elevate the feeder.

Claim.—First, the combination of the knife with the lever C, the treadle G, and the shaft H, the whole acting as and for the purposes named.

Second, the feeder J, as connected with the shaft H and the springs M and N, and as supported by guide K, and working in the transverse slot, as described, the whole constructed in the manner and working essentially as and for the purposes set forth.

No. 35,469.—D. C. RAND and M. WADHAMS, of Perinton, N. Y.—*Improvement in Drying Grain and Similar Substances.*—Patent dated June 3, 1862.—This apparatus consists of a hollow cylinder hung upon a horizontal shaft, to which a rotating motion is given by any convenient power. In the sides of the cylinder are one or more openings provided with flap valves, which open inwards, so as to admit air when on the upper side of the cylinder as it rotates, but close so as to prevent the escape of the grain, &c., as the cylinder turns.

Claim.—The employment of a rotating cylinder for containing and keeping in motion the material acted upon, provided with a valve or valves, or their equivalent, acting automatically for the admission of air for ventilating the contents, substantially in the manner and for the purposes shown and described.

No. 35,470.—C. W. RAWSON, of Little Prairie Ronde, Mich.—*Improvement in Stump Extractors.*—Patent dated June 3, 1862.—This invention consists in applying to a shaft on which the lifting chain is wound, a wheel toothed on its inner periphery to receive at opposite points the pinions of two drum-shafts, upon which are wound ropes to be attached to horses drawing the same in opposite directions.

Claim.—The combination of the gearing C E E with the shaft B and drums D D′, the latter having the ropes F F wound on them in the same direction, and all arranged on a framing A for joint operation, as and for the purpose set forth.

No. 35,471.—H. B. RECORD, of Turner, Maine.—*Improvement in Tree Protectors.*—Patent dated June 3, 1862.—The invention consists in surrounding the trunk of the tree with wire-cloth or other suitable material, upon the top of which is placed a "bonnet," of similar material, in the shape of an inverted cone, having its inner side smeared with tar covered with cotton, for the purpose of preventing caterpillars, ants, &c., from ascending the tree.

Claim.—The shield and bonnet, made, constructed, and used in manner and form substantially as described.

No. 35,472.—NATHAN RICHARDSON, of Gloucester, Mass.—*Improved Fish Cutter or Bait Mill.*—Patent dated June 3, 1862.—This invention consists in the employment of two sets of triangular teeth placed upon shafts, which are geared to rotate in opposite directions. Between the teeth are placed washers, which admit of the teeth passing between each other. One of the shafts is arranged to rotate slower than the other, thus causing its teeth to act as feeders, and effecting also a grinding as well as a cutting motion.

Claim.—The combination of the series of triangular teeth J, acting as cutters, with the opposite series of triangular teeth J′, acting both as cutters and feeders, with the washers K, substantially as described for the purpose specified.

No. 35,473.—G. J. and H. W. ROSS, of New York, N. Y.—*Improvement in Hydrants.*—Patent dated June 3, 1862.—To the eduction pipe is attached a ring which has a projection or eye, into which fits the upper end of a spring of sufficient strength to keep the tube, when not acted upon, in such a position that the cock which is in the main of the supply pipe, will be closed. The water is discharged from the nozzle by turning the latter to the right or left, which, when released, is returned to its original position at right angles with the post by means of the spring.

Claim.—The arrangement of the spring with the rotary eduction pipe, in the manner shown and described.

No. 35,474.—T. W. ROYS, of Southampton, N. Y.—*Improved Rocket Harpoon.*—Patent dated June 3, 1862.—This invention consists in providing a rocket harpoon with a cavity filled with an explosive compound, which will be fired as a bomb by the burning of the rocket. To the head of the harpoon is attached an iron bar, connecting the same with the shank by means of a ring placed in the rear of the jointed wings, so that the instrument will be retained in its place after the explosion of the loaded chamber.

Claim.—The combination of a harpoon and rocket with a bomb, substantially as described, for the purpose of killing whales.

Also, the bar *g g* connecting the barb of the harpoon with the shank of the rocket and is barbs or wings *e e*.

No. 35,475.—T. W. ROYS, of Southampton, N. Y.—*Improvement in Propellers.*—Patent dated June 3, 1862.—The propeller is constructed of a series of buckets linked together (similarly to an endless chain) and running longitudinally under the bottom of a vessel in a track or way along the side of the keel, which track leads into the stern and bow at about the water line, where it passes into the hull of the vessel and over a driving wheel, from whence the buckets receive their motion.

Claim.—Making the tracks or ways on the bottom and in the inside of the vessel, as described, and arranging the propeller therein, and operating the same, substantially in the manner as set forth.

No. 35,476.—T. W. ROYS, of Southampton, N. Y.—*Improved Apparatus for Raising Sunken Whales to the Surface of the Water.*—Patent dated June 3, 1862.—The object of this invention is to provide a means for raising to the surface of the water, whales that have been killed and sunk to the bottom, before means have been taken to secure them with any stronger attachment than the line of the harpoon with which they have been struck, which is effected by means of a heavy barbed instrument provided with clasps, by which it is guided to the carcase of the whale along the tightened harpoon line. The upper end of this instrument is provided with a large eye, through which passes a small line from two reels, by means of which a hawser can be attached so as to raise the body of the whale.

Claim.—First, the construction of an instrument for raising whales, with side eyes or clasps, by which it may be guided by the harpoon line to the body of a whale as described.

Second, the formation of an eye on a whale raiser, through which a hawser may be hauled by means of a cod line, in the manner specified.

Third, the use of a barbed instrument combined with a small line on reels, substantially as described, for the purpose of attaching a hawser to a whale.

No. 35,477.—F. M. RUSCHHAUPT and JOHN SCHULTE, of New York, N. Y.—*Improved Percussion Powder.*—Patent dated June 3, 1862.—The object of this invention, the nature of which is stated in the claim, is to obviate the objections incident to the use of fulminate of mercury, phosphorus or other poisonous or corrosive substance in the manufacture of fulminating powder.

Claim.—The application of tanin, pyrogalic acid, or substances analogous in physical and chemical properties to them, in a manner as described and for the purpose set forth.

No. 35,478.—SAMUEL SLOCOMB, of East Cambridge, Mass.—*Improvement in Inkstands.*—Patent dated June 3, 1862.—This invention consists in providing the inkstand with an annular air-tight joint arranged on the top of its mouth and on the under side of the supporting flanch of the ink cup, for the purpose of avoiding the difficulty caused by the ink cup becoming set or fixed in the neck by dried ink.

Claim.—The improved piston and well inkstand as made with the ground or air-tight joint arranged on the top of the neck of the ink reservoir, and on the bottom of the flanch of the ink cup, and with the annular space between the neck and the cup as set forth.

No. 35,479.—J. W. STOUT, of Raritan, N. J.—*Improvement in Harvesters.*—Patent dated June 3, 1862.—The wheels upon which the frame of the machine is supported, are placed on separate and independent axles to the inner ends of which are attached wheels toothed on the inner side of their peripheries so as to gear with pinions placed loosely on each end of a transverse shaft in the front part of the frame. To each pinion is attached a ratchet, the teeth of which engage with a pawl upon the transverse shaft and cause the latter to rotate when the machine is drawn forward. In backing the machine, the ratchet slips over the pawls, and the shaft remains stationary, so that the sickle does not operate. Upon the transverse shaft is a bevel wheel which gears into a pinion upon the front end of a longitudinal shaft, having upon it a sleeve provided with a crank at its lower end, from which the sickle is driven by a connecting rod.

Claim.—The combinaton and arrangement of the frame F on the axles D D of the wheels B B, with the gearing E E H H, ratchets I I, pawls J J and bevel gears K L, substantially as and for the purpose set forth.

No. 35,480.—HARVEY MANN, of Bellfonte, Pa.—*Improvement in Axes.*—Patent dated June 3, 1862.—This invention consists in placing the steel upon the iron in welding so that

the former shall be upon the outside of the iron at the weld, and extend up on the iron above the weld to allow of the wear coming upon the steel, and preventing the unevenness at the weld, the usual plan being to place the iron outside of the steel at the weld.

Claim.—Scarfing the steel at its edges and bending it into a U or bow shape so as to slip over the end of the blank or iron part of the axe to be welded thereon, substantially in the manner and for the purpose represented.

No. 35,481.—L. J. WHITCOMB and W. E. PRALL, of Maineville, Ohio.—*Improvement in Apparatus for Evaporating Saccharine Juices.*—Patent dated June 3, 1862.—This apparatus is composed of a series of pans whose bottoms are all on a level, and communicate with each other by means of apertures in their dividing walls, which apertures are provided with valves attached to a common stem connected to a lever, by which they can be simultaneously acted upon. Suspended from derricks on each side of the apparatus are two settling pans, which can be alternately elevated, so that while the contents of one pan is settling, the other may be receiving crude liquor from the evaporators. Each defecator is provided with a faucet, having around its plug a spiral channel, so that by turning the plug the discharging orifice may be made to tap by degrees a lower stratum of the liquor, so as gradually to decant off the entire portion free from sediment.

Claim.—First, the arrangement of a range of boiling pans upon a common level, communicating through apertures, adapted to be simultaneously opened or closed by the connected series of deflecting valves E, constructed and operating substantially as and for the purposes set forth.

Second, the arrangement of side defecators or settling pans H H′, adapted to be elevated or depressed, and operated in the manner set forth.

Third, the decanting faucet J j j′, having a provision for a gradual descent of the discharging aperture or ventage, as and for the objects stated.

Fourth, the arrangement of the reservoir M, which receives crude sap from the mill and discharges the same into the first boiling pan by a pipe N which traverses the furnace for pre-heating the crude sap, as set forth.

No. 35,482.—JONATHAN WHITE, of Antrim, N. H.—*Improved Apple Parer.*—Patent dated June 3, 1862.—This device is composed of a furcated mandrel supported by a vibratory frame or lever in such a manner as to be capable of being freely revolved by the action of a train of gears, in connexion with a stationary toothed sector, upon which the frame is moved, by means of which, the mandrel which holds the apple is caused not only to revolve on its axis but also move around in the sector of a circle, so as to cause the knife to pare the apple in a spiral direction from the stem to the eye. By means of a cam, the knife frame is forced against a stop during the retraction of the vibratory lever, by which means the knife holder is properly set or adjusted for the removal of one and the replacement of another apple.

Claim.—An improved apple-paring machine, made substantially as described, viz., not only with its paring tool *h* or the stock G thereof, applied to a vibratory arm F, controlled by a spring, or its equivalent, and with its apple mandrel A supported by a vibratory frame B, but with a stationary toothed sector *d* and a train of gears *a b c*, and with a cam *i* and stop *k*, the whole being so as to operate substantially in the manner and for the purpose as specified.

No. 35,483.—C. J. WOOLSON, of Cleveland, Ohio.—*Improvement in Cooking Stoves.*—Patent dated June 3, 1862.—This invention consists in introducing into the fire chamber of cooking stoves a frame work of cast iron constructed of perpendicular and horizontal bars, for the purpose of protecting the fire plate and contracting or enlarging the fire chamber.

Claim.—The construction and arrangement of the perpendicular and horizontal connecting bars in the fire chamber of cooking stoves, in the manner described and for the purposes set forth.

No. 35,484.—HORATIO WORCESTER, of New York, N. Y.—*Improvement in Iron Frames for Pianos.*—Patent dated June 3, 1862.—This invention consists in making the plate in two pieces, one part being stationary and attached to the instrument in the usual manner, and the part to which the strings are fastened being constructed separately with a link in the base end by which it is suspended to an abutment on the stationary part, moves freely for the purpose of communicating an increased vibratory power throughout the sounding board under the plate.

Claim.—The plate made in two pieces, D and F, connected by a hinge or coupling E, the effect of both being to give a more full and complete vibration to the sounding board.

No. 35,485.—DAVID ZUG, of Shaefferstown, Pa.—*Improvement in Harvesters.*—Patent dated June 3, 1862.—This invention consists in the employment of pawl heads, which have a central tube fitting over the axle and entering the bore of the traction wheels. The outer end of the pawl tube is secured to the axle by a pin, and revolves with it while the traction wheels move on the entering tubes of the pawl heads. A ratchet box in the hub, in connexion with the pawls, serves to operate the connecting gearing. When the machine is backed the wheels revolve freely in the tubes without giving motion to the gearing. Below the rear

cross-piece of the truck is a slotted two-flanged hanger, which is operated by a vibrating bar, so that the driver is enabled to raise the sickle bar over any obstructions and adjust it at any desired height. The outer end of the main bar which is attached to the delivery shoe is adjusted and kept parallel with the ground by means of a hinge plate having projecting knuckles or ears for the adjustment of the arm of the pulley wheel, a pintle of sufficient length entering the ears and the pulley arm. A close, perforated lug, which may be set over or under the pulley arm, forms an intermediate support, and also serves to steady the connexion of the arm on the hinge plate.

Claim.—First, the tubulated and flanged pawl heads 61 connected with the main shaft or axle W of the machine in combination with the ratchet box *b*, which forms the hub of the traction wheels B, and is supported on the tubes *c* of the pawl heads, for the purpose and in the manner specified.

Second, the double flanged and slotted hanger 5, constructed and applied in the manner and for the purpose specified.

Third, the specific construction and arrangement of the hinge plate Q for adjusting the pulley N on the driving shoe L in combination with the loose and changeable perforated lug *o*, for the purpose set forth.

Fourth, the arrangement and construction of the T-flanged sliding screw boxes H 1 H 2 in combination with the screw F for regulating the real shaft, in the manner specified.

No. 35,486.—S. E. CLEVELAND, of Buffalo, N. Y., assignor to JONATHAN MAHEW and T. S. RAY, of the same place.—*Improvement in Headlights for Locomotives.*—Patent dated June 3, 1862.—This lamp is constructed so as to form an annular oil and wick chamber to the lower part of which is connected a tube having perforations for modifying the supply of air to the *interior* of the wick and flame. The annular chamber is also surrounded near its top by a perforated shield to modify the supply of air to the *exterior* of the flame. The annular chamber is extended downwards by the addition of a flat tube so as to admit of the use of a rack and pinion to raise the wick. The bottom of the tube is provided with a slide which admits of ready access thereto for cleaning and trimming the lamp.

Claim.—First, the combination and arrangement of the perforated tube E, oil and wick chamber A, and perforated shield G, the said perforated tube being connected to the bottom of the oil chamber for the purpose of modifying the supply of air to the interior of the wick and flame, and the perforated shield being connected to the top for the purpose of modifying the supply of air to the exterior of the wick and flame, substantially as described.

Second, a double or compound stuffing box having two glands, the smaller within the larger, constructed and operating substantially as set forth.

Third, extension of the oil chamber downwardly, as represented by the flat tube I, in combination with the rack and pinion and narrow ring for raising and lowering the circular wick, substantially as set forth.

Fourth, the sliding bottom F, in combination with the perforated tube E, for opening and closing the mouth of the tube, substantially as set forth.

No. 35,487.—J. C. CONKLIN, of Yorktown, N. Y., assignor to G. W. DEPEW, of the same place.—*Improvement in Harrows.*—Patent dated June 3, 1862.—This invention consists in attaching to an axle mounted on wheels, a series of beams extending to the rear of the axle and provided with teeth. These beams are so attached to the axle as to admit of an up-and-down motion to each beam independently of the others, and so that all of them may be turned over upon the axle and out of the way when the machine is moved from place to place.

Claim.—The application of the teeth bars of a harrow to an axle in such a manner that each tooth or pair of teeth may move independently of the rest, substantially as set forth.

No. 35,488.—JAMES C. COOKE, of Middletown, Conn., assignor to Himself and JULIUS HOTCHKISS, of the same place.—*Improvement in Breech-Loading Fire-arms.*—Patent dated June 3, 1862.—This invention consists in pivoting the rear end of the movable breech piece to a locking and adjusting link, which is so hinged within the stock and a solid shoulder adapted to the link and breech piece, that the latter moves backward out of the bore of the gun and downward below said bore when the guard of the gun is moved in one direction, and in so moving destroys the locking power of the toggle formed between itself and the link, and forms with the link nearly a right angle. The breech also moves upwards and forwards into the bore of the gun when the guard is moved in a converse direction, and in so moving closes the breech of the gun and rests when the said movements cease, on a straight line with the link and bore of the gun so as to offer a solid resistance to the explosive action of the charge. An adjustable conical plug with a stem is also used in combination with an adjustable tubular sleeve and with the moving breech piece, for the purpose of insuring a gas-tight joint.

Claim.—First, the operation of the breech piece so that it moves upward and forward and enters into the breech end of the fire-arm a short distance by the movement of the guard lever, and offers a resistance through its connexions in a line or nearly so with the bore of the barrel and moves out of the bore of the fire-arm downward and backward when the lever guard is moved in a converse direction, substantially as and for the purposes set forth.

Second, constructing the socketed breech piece B with a screw thread *e* and with an

aperture *h* so as to receive a sleeve *f* and admit a pin wrench to holes in the sleeve, and also that the sleeve may be made to follow the plug *b* and support it when an outward adjustment is made, all in the manner and for the purpose described.

Third, the bevelled shoulder piece *d* in combination with the bevelled breech piece B, substantially as and for the purposes set forth.

Fourth, the combination of the link G, breech piece B, links D E, and lever guard for performing the functions named in the first claim above, substantially as set forth.

Fifth, the combination of the link G and shoulder piece *d*, substantially as and for the purposes set forth.

No. 35,489.—H. S. PHILLIPS, of Westfield, Mass., assignor to Himself and G. E. NOBLE, of the same place.—*Improvement in Sash Fasteners.*—Patent dated June 3, 1862.—This invention consists in the employment of two racks, one of which is secured to the upper sash, and the other adjusted to the lower sash, operated by a cog-wheel placed between the two. By means of a pin and fastener the sashes may be retained at any desired height.

Claim.—The combination of the rack 4 and cog-wheel 6, with the rack 5 and fastener 7, constructed and arranged in the manner and for the purposes set forth.

No. 35,490.—J. B. SCHALKENBACH, of Triers, Prussia, assignor to E. JUSTH, of San Francisco, Cal.—*For Piano Orchestra.*—Patent dated June 3, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—The application, in combination with harmoniums, piano-fortes, or other instruments played by keys, of percussion instruments, such as drums, cymbals, tam-tam, and triangle, arranged substantially as described, whereby the player is enabled to play the said percussion instruments by making use of his hand or arm while playing with the fingers on the keys of the other instruments, substantially as set forth.

Second, the use for playing the drum or cymbal of elastic sticks *g g n o p*, arranged and having springs *j j* applied to their buts, and operated by means of keys *g2 g2 n2 o2 p2*, connected with the buts, all substantially as set forth.

Third, the employment of mechanism, substantially such as is represented in figures 3 and 4, and described, applied to operate upon the keys to retain the valves of the harmonium or other wind instrument, in an open condition when desired, substantially as set forth.

Fourth, the metallic tubes or funnels U U, applied in combination with the harmonium or other reed instruments, substantially as specified.

Fifth, the relative arrangement of the several percussion instruments, consisting of the drum, cymbal, tam-tam, and triangle, and their playing mechanism, substantially as set forth.

No. 35,491.—B. S. STOKES, of Manchester, N. H., assignor to Himself and W. H. BURWICK, of the same place.—*Improvement in Mouth-pieces for Cigars and Pipes.*—Patent dated June 3, 1862.—This invention consists in constructing the mouth-piece of a cigar holder or pipe with one or more passages or ducts in addition to the usual smoke duct, the said passages opening into the mouth and extending to a point where the lips close to the outer air, so that one or more currents of cool air can be inhaled at the same time with the smoke for the purpose of keeping the mouth cool while smoking.

Claim.—The construction, substantially as described, of ventilating mouth-pieces for cigars and pipes, so that one or more currents of cold air may be inhaled into the mouth at the same time the smoke is received through the ducts independent of the smoke duct, for the purposes set forth.

No. 35,492.—H. D. STOVER and E. S. WRIGHT, of New York, N. Y., assignors to said H. D. STOVER.—*Improvement in Scroll Sawing Machines.*—Patent dated June 3, 1862.—The nature and object of this invention are explained by the claim.

Claim.—First, the method of hanging the saws by means of straps to the forward and segmental ends of two walking beams or levers, the rear end of which is restrained by a spring, arranged and operating substantially in the manner set forth.

Second, the method of permanently maintaining the requisite tension throughout the whole stroke of the saw by means of a spring applied to each end of the saw, the two springs being constructed, arranged, and operating as described, to compensate each other, substantially in the manner set forth.

Third, the method of regulating the amount of tension to the saw by combining with each of the tension-producing springs a screw or its equivalent, so operating upon the said spring as to increase or decrease its elasticity, both the springs and screw being arranged in relation to each other and in relation to the moving parts of the machinery, so that the regulating of the tension may be effected while the saw is in motion, substantially in the manner described.

Fourth, in combination with the side piece or buckle a guide block, constructed and arranged as described, to admit of adjustment within an adjustable guide bed in accordance with the length and rake of the saw.

Fifth, the employment of vulcanized India-rubber springs, the constituent parts whereof are constructed, arranged, and combined as described, so that the springs shall operate by virtue of compressibility in contradistinction of the tensibility of India rubber.

No. 35,493.—DWIGHT TRACY, of Worcester, Mass., assignor to Himself and J. P. HALE, of New York, N. Y.—*Improvement in Spools for Sewing Thread.*—Patent dated June 3, 1862.—The object of this invention is to produce a spool which shall be adapted to carry the under thread of the lock-stitch sewing machines, and at the same time be equally available for use as a common spool. It is formed of a spindle, upon which are placed heads of thin elastic material, cut so as to fit the spindle by punching the material in V-shaped parts and securing them to the spindle.

Claim.—First, uniting the parts of spools and forming the tube or barrel thereof by the stock of the heads turned inward, substantially as described and specified.

Second, securing the heads upon the tube or barrel by pinching them between the flanges raised in the tube or barrel, substantially as set forth and specified.

No. 35,494.—W. A. BARLOW, of Elkhorn, Wis.—*Improvement in Stoves.*—Patent dated June 3, 1862.—The novelty of this invention consists in the combination of the several parts named in the claim, the separate parts being disclaimed.

Claim.—The combination of the four tubes E E E E, cap C, body B, opening and cover K, door N, damper G, opening H, valve I, or, in place thereof, the self-regulator, M, with hollow base A, with partitions *a a*, flue F, connecting rods D, in the manner shown and described, all being arranged as and for the purpose set forth.

No. 35,495.—RICHARD MONTGOMERY, of New York, N. Y.—*Improved Shield for Iron-clad Vessels.*—Patent dated June 3, 1862.—This invention relates to an improvement in iron-clad vessels, for which a patent was granted to the said Montgomery, March 18, 1862, and it consists in the employment of a swinging or hinged shield formed with two exterior faces, consisting each of a truncated triangle with their faces inclined to each other in such a manner as to meet at the line of their axis of motion, the edges of the shield meeting the flaring sides, or nearly so, of the orifices in the side of the ship, thus covering the openings in the hollow tubes or conductors described in the patent above referred to.

Claim.—A shield, arranged and operating substantially in the manner set forth.

No. 35,496.—RICHARD MONTGOMERY, of New York, N. Y.—*Improvement in Apparatus for Bending Corrugated Plates of Metal.*—Patend dated June 3, 1862.—This apparatus consists of a base, which forms the matrix of the die or former, made of cast or wrought iron, having as many elevations and corresponding recesses as is necessary to receive the width of the plates of corrugated metal to be bent or curved, the upper surface to be sunk or hollowed in the centre so as to form the segment of a circle of any desired degree of curvature. Fitted to this base piece is a block or die provided with corresponding elevations and depressions moving in guides and operated by a screw.

Claim.—The construction and arrangement of formers so shaped and fitted to each other as to prevent the spreading or crinking of corrugated beams or plates while in the process of being bent into curves in the manner described and for the purposes set forth.

No. 35,497.—JAMES ADAIR, of Pittsburg, Pa.—*Improvement in Condensers for Oil Stills.*—Patent dated June 10, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—First, the use of a worm chest, constructed substantially as described, immersed in a vat or vessel of water, for the purposes set forth.

Second, causing the oleaginous vapor to be condensed to pass through a zigzag passage, one side of which is a water surface, in order to secure a more rapid condensation and to enable the condensed fluid to be drawn off at different points in the manner described.

Third, so constructing the worm chest of the condenser as to separate the different qualities of oil by partitions, which the condensed fluid cannot pass, but which present no obstacle to the flow of the uncondensed vapor and gas through the worm, for the purpose set forth.

Fourth, admitting the cold water in a shower into the worm chest at its rear end by a perforated pipe, through which the gas and uncondensed vapor are compelled to pass in their exit from the condenser, substantially as and for the purpose described.

No. 35,498.—J. R. AGNEW, of Mercersburg, Pa.—*Improvement in School Globes.*—Patent dated June 10, 1862.—This invention consists in the employment of textile fabrics, strengthened, if necessary, by means of metal wire, in the manufacture of globes for schools, &c.

Claim.—A globe made of textile fabrics either alone or combined with and strengthened, if desired, by wire netting or leather, substantially in the manner and for the purposes described.

No. 35,499.—A. G. BRADFORD, of Freeport, Ill.—*Improvement in Chain Pumps.*—Patent dated June 10, 1862.—This invention consists in the employment of a series of cylindrical blocks provided at each end with a loop, which loops are connected together by rings so as to form an endless series of buckets.

Claim.—The combination of the buckets with the handles and connecting rings, when used for the purpose of elevating water or other fluids, substantially as specified.

No. 35,500.—S. R. BRANN, of Hillsboro', Ill.—*Improvement in Dampers.*—Patent dated June 10, 1862.—This invention consists in connecting the expansion rod with the damper by means of a double crank shaft and spring in such a manner that an expansion of the rod beyond a certain degree exerts no injurious influence on the connexion or on the damper, and that when the damper is once closed and the rod continues to expand, the entire strain exerted by the rod is thrown on the spring.

Claim.—The arrangement of the spring E in combination with double crank shaft B, damper A, rod D, and stove-pipe or flue C, all constructed and operating substantially in the manner and for the purpose shown and described.

No. 35,501.—H. L. and C. P. BROWN, of Sbortsville, N. Y. —*Improvement in Grain Drills.*—Patent dated June 10, 1862.—This device is designed to be applied to an arrangement of flanched disks for distributing the grain, for which a patent was granted on November 4, 1851, to Foster. Jessup, Brown & Brown, and the invention consists in a method of regulating the capacity of the distributing orifice or discharge passage described in the said patent. The disks are so constructed as to operate in connexion with a square or many-sided shaft.

Claim.—First, the arrangement of the flanched disks B C, circular channel *n*, and adjustable gauging device E, substantially in the manner and for the purpose described.

Second, the arrangement of the flat-sided shaft D, disk C, with inner hub *c*, and stationary disk B with box *b*, substantially in the manner and for the purpose described.

Third, the arrangement of the cut-off F and outer extension of the box *b* in combination with the inlet orifice *f*, substantially in the manner and for the purpose described.

No. 35,502.—N. T. BROWN, of Ononwa, Iowa.—*Improvement in Horse Rakes.*—Patent dated June 10, 1862.—Fitted transversely to the back part of a frame, and turning freely in the same, is a rake head provided with teeth projecting from each side. Passing through the rake head, at right angles to the teeth, are two bars, one of which rests upon a slide secured in grooves in the frame, so as to be capable of being moved forward or back by means of a lever and connecting rod. These bars serve to keep the teeth in a position to gather up the hay, and when a sufficient quantity is collected the slide is drawn forward, thus releasing the bar and allowing the rake to turn half a revolution and discharge the hay. The slide is then again pushed back.

Claim.—The combination of the bars B' B' with the straight rake teeth *e*, rake head *a*, slide D, rod E, slotted lever G, and reversible lever H, all in the manner and for the purpose shown and described.

No. 35,503.—W E. BROWNE, of Valley Falls, R. I.—*Improvement in Explosive Projectiles for Ordnance.*—Patent dated June 10, 1862.—Upon the exterior of the projectile are formed a series of longitudinal recesses for the reception of the expanding wings, which are attached to the same by a pin at their rear ends, and so arranged as to cause, when opened, a rotary motion to the projectile after its discharge from a smooth bored gun. In one or more of the recesses is provided a nipple with a vent to the central cavity which contains the charge of gunpowder, a percussion cap being applied to each nipple for the purpose of effecting the explosion of the projectile.

Claim.—First, the arrangement of the expanding wings DD to swing from recesses in the sides of the body of the projectile upon pins *c c*, arranged obliquely to planes passing through the axis of the projectile, substantially as and for the purpose set forth.

Second, the combination of one or more expanding wings DD, attached to the body of the projectile, and one or more nipples, or their equivalents, provided on the said body for the reception of percussion caps or other percussion priming, whereby the said wings are made to constitute hammers for the explosion of the percussion priming, substantially as specified.

No. 35,504.—T. J. CAMPBELL, of Lincoln, Ill.—*Improvement in Automatic Revolving Ordnance.*—Patent dated June 10, 1862.—Over the revolving cylinder to which the barrel is secured is supported, by means of a pulley, a capping belt formed of an endless belt having holes or cavities into which are inserted percussion caps to fit the nipples on the cylinder, so that as the latter revolves the caps are brought in succession upon the nipples. The swab and rammer are attached to a sliding frame, which supports a reservoir into which the cooling and lubricating substance is placed and conveyed through the shank of the swab into the cylinder at the same time the rammer is forcing the charge into another chamber which is in a position to receive it.

Claim.—First, the application of the copying belt, operated by the action of the cylinder B.

Second, the lubricating box *o*, in combination with the reciprocating swab *m*, and ramrod *n*, substantially as set forth.

No. 35,505.—P. S. CARHART, of Collamer, N. Y.—*Improvement in Cultivators.*—Patent dated June 10, 1862.—This invention consists in attaching the draught pole to the front bar of the frame, in such a manner that the latter will be supported by the draught pole when in use. The rear end of the pole is attached to the back bar of the frame by means of a rack, to which is fitted a toothed lever, by means of which the rear end of the tongue may be raised or lowered, and thus regulate the depth of penetration of the teeth in the ground.

Claim.—The means, substantially as shown and described, for regulating the depth of the penetration of the teeth B of the implement in the ground, to wit, the attaching of the draught pole C to the front bar *a* of the frame by a bolt *d*, and having its back end connected to the back bar *a* of the frame by a rack-plate E, lever F provided with a toothed segment *i* and an adjustable pin *j*, which fits in notches *f* in the plate E, to operate as set forth.

No. 35,506.—GARDNER CHILSON, of Boston, Mass.—*Improvement in Parlor Stoves.*—Patent dated June 10, 1862.—The grate in this stove is provided with journals that rest upon bearings so constructed as to admit of the grate being removed from them, and also to have the end of its front bearing inserted in a grate rotator which is entirely separate from the grate, and rests in a socket made within a frame in the mouth of the ash chamber, through which frame the rotator projects, its projecting part being made star-shaped, so that a key may be applied to effect the movement of the grate. Within the cylindrical case is an oven having flues in contact with three of its sides, which flues lead from the fire chamber to a domed chamber over the oven. The lower part of the oven is made of concavo-convex form towards the fire chamber, for the purpose of facilitating the application of a cover, strengthening the oven plate and preventing it from being warped.

Claim.—The separate grate rotator as made, not only with a grate attachment or device for connecting the grate with it, but with a head, or its equivalent, for receiving a key or lever.

Also, the construction of the ash-pit mouth frame with a socket for the reception of the said grate rotator, made separate from the grate, and also in manner and so as to operate the grate, as specified.

Also, the arrangement of the conical enlargement ring, the fire chamber, the oven, and the flue spaces about the sides and top of the oven.

No. 35,507.—G. F. J. COLBURN, of Newark, N. J.—*Lamp Reflector and Chimney Protector.*—Patent dated June 10, 1862.—To the upper portion of a glass chimney is applied a metal tube, serving as a shield, having attached at its lower portion a piece of metal acting as a reflector and shade, and so arranged as to reflect the light in any required direction.

Claim.—The arrangement and construction of a metal shield and reflector for lamp chimneys in the manner and for the purpose specified.

No. 35,508.—ASAHEL COOLEY, of Chicago, Ill.—*Improvement in Pumps.*—Patent dated June 10, 1862.—A top piece is attached to the cylinder so as to form an annular chamber, which communicates with a series of induction passages at the side of the cylinder, and over which is arranged a ring valve. The piston is provided with a series of passages, communicating by means of annular passages with a circular valve-chamber, within which is a ring valve. Attached to the piston, and communicating with the above-named valve-chamber, is a hollow piston rod, which passes loosely through the top piece and extends to the top of the well. As the pump is operated slowly or rapidly, any jar or back flow of water is prevented, the ports being closed promptly by the weight of the corresponding ring valves when the movement of the piston is reversed.

Claim.—First, the manner described of felling the cylinder above the piston, to wit, by the employment of the induction ring valve *c c* surrounding the bore of the cylinder at the top of the same, the posts *c c c c c c* of which being so arranged as to direct the water underneath said valve *c c*, or be closed by the falling of the same, substantially as described.

Second, the eduction passages *l r s t*, or their equivalent, so constructed and arranged as to receive the water above the piston, and convey it underneath and through the eduction valve *i'*, substantially as described.

Third, the tubular piston rod F and eduction valves *i* and S, arranged and operated substantially as described.

Fourth, the parts *g* C and *d d* arranged substantially as described, when combined with a pump cylinder and the tubular piston rod F for the purposes set forth.

No. 35,509.—F. W. DAHNE, of Swansea, Glamorganshire, Great Britain.—*Improvement in Extracting Copper from Ores.*—Patent dated June 10, 1862.—Patented in England, Sept. 26, 1860.—The nature of this invention is set forth in the claim.

Claim.—The roasting of a mixture of copper ore with sulphate of iron so as to convert the copper into sulphate and the iron into peroxide, and then separating the sulphate of copper by lixiviation, as described.

No. 35,510.—J. S. DE HAVEN, of North Springfield, Ohio.—*Improvement in Grain Drills.*—Patent dated June 10, 1862.—This device consists of a cylindrical tube, to the lower front part of which is riveted a steel tooth of the form shown in the engraving. In the lower end of the tube, and extending across its opening, is a bolt which serves to spread or scatter the grain as it falls through the tube over the space formed by the tooth.

Claim.—The combination of the inclined and tapering metal tube A with the peculiarly-shaped metal tooth, as represented, and the spreading bolt I, constructed, combined, and arranged in relation to each other as shown and described.

No. 35,511.—HENRY EVANS, JR., of Baltimore, Md.—*Improvement in Apparatus for Steaming Oysters.*—Patent dated June 10, 1862.—This invention consists in the employment of a box provided with an opening and with rails upon its floor, upon which rails run small cars filled with oysters. The bottoms of the cars are constructed of bars having spaces between them to allow of steam passing up among the oysters in the box. A lateral transfer table is arranged to run upon rails in an opening at right angles to the steam-box, so that as soon as a load is steamed it may be removed and a series of cars be successively run into the steam box and quickly removed.

Claim.—In combination with a steam box, the cars and tracks, constructed and arranged substantially as described.

No. 35,512.—J. W. FIESTER, of Winchester Ohio.—*Improvement in Cooking Apparatus.*—Patent dated June 10, 1862.—This apparatus is so arranged as to be readily applied to an ordinary house fire grate, where it is designed to make one fire answer the several domestic uses for cooking and warming the apartment. The claim and engraving explain the invention.

Claim.—The combination and arrangement of the top plate E, middle plate D, lower plate C, and baker B, so as to form an improved apparatus for cooking before grates, constructed and operating substantially in the manner and for the purposes set forth.

No. 35,513.—F. G. FORD, of New York, N. Y.—*Improvement in Window Sash.*—Patent dated June 10, 1862.—The sashes are secured in the frame by means of fixed and movable beads, the latter being held in position above by spring catches so as to admit of their ready removal. The cords by which the weights are suspended, are connected to the sashes by means of hooks placed in cavities in the edges of the sash, so that they may be easily removed. In the lower rail of the upper sash is secured a nut corresponding with a socket in the u r rail of the lower sash, within which socket a screw bolt turns freely, guided by a pin projecting from the inside of the side socket, so that as the sash is raised, the screw bolt is retracted within the socket when the sash is to be raised or lowered, and enter the nut when the sash is to be secured.

Claim.—First, in the described combination with the movable beads C attaching the suspension cords F to the sash by means of hooks H, placed in cavities in the edges of the sash, admitting of the ready and complete removal of the sash from the window frame.

Second, fastening the upper and lower sash together by means of a screw M O P, guided by a pin N in the socket L, so as to be retracted within the socket when the sash is to be raised or lowered, and protrude from the said socket and enter and bind within the nut K when the sash is to be raised or lowered, and protrude from the said socket and enter and bind within the nut K when the sash is to be secured, all as explained.

No. 35,514.—WILLIAM FRADGLEY, of Greenbush, N. Y.—*Improved Corkscrew.*—Patent dated June 10, 1862.—This device is composed of a cylindrical casing, the lower part of which is of a size to hold a quart-bottle cork, and the upper part is made smaller to receive a cylinder fitted snugly to its bore, and having on its periphery a square threaded spiral groove into which fits a pin secured to the upper rim of the case. In the inner cylinder is a cavity extending through it longitudinally, in which moves a hollow socket consisting of two half cylinders that hold when together, by a coupling head or flange upon one, the corkscrew, and by a head upon the other, the handle shaft, so that, as the handle is turned, the screw enters the cork, and when fully inserted the couplings become released and the further movement of the handle causes the inner cylinder to rise and draw the cork.

Claim.—The screw K and handle shaft L, with their coupling heads *e* and *r* and their socket *a*, the pin *p* in the shaft with its notch *f* in the top of the cylinder E, the cylinder E with its groove G and pin H of outer cylinder A, the whole operating together as a corkscrew, substantially in the manner set forth.

No. 35,515.—JOHN GIBSON and MICHAEL HEBERGER, of Cincinnati, Ohio.—*Improvement in Hydrants.*—Patent dated June 10, 1862.—This invention relates to a method of attaching a hydrant to its stock. To the leaden pipe is permanently soldered a brass elbow into which is screwed the cock shank. Over the outer portion of the elbow is an escutcheon secured by wood screws to the stock, against the face of which is screwed a nut so as to draw the shoulder of the elbow against the back of the escutcheon, and thus secure the parts rigidly in place. Between the cock shank and the elbow is a gasket for securing a water-tight joint.

Claim.—The combination of the elbow C *c*, screw-shanked cork D, annular gasket G, scutcheon E *e*, and clamp nut F, all constructed, arranged, and employed in the manner and for the purposes set forth.

No. 35,516.—SIMEON GROVER and STEPHEN PUTMAN, of Newton, Mass.—*Improvement in Coal Sifters.*—Patent dated June 10, 1862.—This invention consists in the employment of two cross-pieces or a rim C suspended from a rim A, adapted to fit the top of an ordinary barrel, upon which cross-pieces may be set a common sieve containing cinders to be sifted. A cover is placed over the top and motion is imparted to the whole by means of a handle jointed to the rims.

Claim.—The sifter, composed essentially of the enclosing and supporting rim A, the suspension cross or rim C, and shaking handle D, with their appendages, constructed and arranged so as to be used in connexion with a common cask or barrel and coal sieve, substantially as specified.

No. 35,517.—J. C. HALL, of Cincinnati, Ohio.—*Improved Sofa convertible into a Table, Trunk, Cot, &c.*—Patent dated June 10, 1862.—The object of this invention is to provide an article of furniture that may be readily converted into several forms as designated in the claim for the use of persons camping out or occupying confined apartments.

Claim.—The arrangement of box A *a a'*, seat G, ledge G', and hinges E, hinged and folding back B B' F, the whole forming a convertible cot, settee, desk and table, as described.

No. 35,518.—A. G. HECKROTTE, of New York, N. Y.—*Improved Washing Machine.*—Patent dated June 10, 1862.—This invention consists in the combination of a series of rollers forming a concave and an open cylinder formed of slats, arranged in such a relation to each other that the clothes placed between the two at one side of the tub, are rubbed and transferred with a constantly increasing pressure until they reach the lowest point of the tub, when they are carried up the opposite side and over the rubbing cylinder. The journals of the cylinder shaft are provided with spring bearings to enable them to yield to any undue pressure.

Claim.—The combination of the rollers *b*, the cylinder D, and the spring bearings *i*, when constructed and arranged substantially in the manner described and for the purpose specified.

Also, the application of the rubbing cylinder when constructed with fixed revolving rollers, as described, in combination with the concave of rollers *b*, as set forth.

No. 35,519.—V. W. HOUCK, of Buffalo, N. Y.—*Improvement in Crozing Machines.*—Patent dated June 10, 1862.—This invention consists in the employment of two endless chains composed of jointed links placed upon drums with which they revolve. The upper surface of these links, upon which the stave is laid, forms an arc of the inside longitudinal curve of the barrel. The journal boxes of the drum shaft are made yielding by being hinged at one end to the main frame and resting upon a coiled spring at the other end, so as to adapt the machine to chamfer and croze staves of different thicknesses. The former for each end of the stave is composed of three small wheels supported in an appropriate hanger, which is made adjustable horizontally and vertically upon a slotted cross-piece.

Claim.—First, the endless revolving bed composed of the jointed links D, the said links being so constructed that a transverse surface line will correspond to an arc of the longitudinal curve of the barrel, or nearly so, for the purposes and substantially as described.

Second, supporting the shafts B', and hence the drums B, in yielding journal boxes *b2* in combination with the described endless revolving bed, for the purposes and substantially as set forth.

Third, wheel formers made adjustable horizontally on the cross-piece O, and placed on a line corresponding to the longitudinal curve of the barrel, for the purposes and substantially as set forth.

No. 35,520.—H. N. HOUGHTON, of Halifax, and C. H. DENISON, of Brattleboro', Vt.—*Improvement in Shells for Rifled Ordnance.*—Patent dated June 10, 1862.—This invention consists in making the screw bolt which connects and holds the several parts of the projectile together hollow, so as to serve as a fuse tube which may be fitted at the end with a percussion cap for exploding the projectile.

Claim.—The employment of the screw bolt F, applied as and for the purpose specified as a fuse tube, substantially as described.

No. 35,521.—C. T. JAMES, of Providence, R. I.—*Improvement in Explosive Shells for Ordnance.*—Patent dated June 10, 1862.—This invention consists in extending the shell portion or magazine of the projectile down toward the base of the latter, making the magazine or shell portion in the shape of a prolate spheroid, in combination with a surrounding, expansible ring or packing, so arranged as to make the external figure of the base or lower half of the projectile cylindrical.

Claim.—In combination with the conically-shaped base of the shot or hard metal, an expansible base piece of soft metal, arranged to operate substantially as described for the purpose set forth.

No. 35,522.—E. A. JEFFREY and J. D. QUACKENBUSH, of Corning, N. Y.—*Improvement in Pumps.*—Patent dated June 10, 1862.—A reference to the description and drawings will be necessary for a proper understanding of this invention.

Claim.—First, the combination and arrangement of the cylinder A with the parts constituting the valve chambers D D, and with the packing chamber H, so as to secure the suction and discharge pipes G G and F F in sockets in their respective parts, substantially in the manner and for the purpose shown and described.

Second, the India-rubber rings *b b* and perforated screw rings *d d*, so constructed and arranged as by their compression to pack not only the piston, but the joints *a a* of the cylinder, substantially as shown and described.

Third, the passage K for admitting water to the stuffing box of the piston, substantially

Claim.—First, the arrangement of

Third, the passage K for admitting water to the stuffing box of the piston rod and maintaining it there under the discharge pressure of the pump, substantially as and for the purposes set forth.

Fourth, in combination with the foregoing, the perforated tube *p* and gasket *r* for excluding water from entering the cylinder from the stuffing box, substantially as set forth.

No. 35,523.—GEORGE JONES, of Peekskill, N. Y.—*Improvement in Sash Fasteners.*—Patent dated June 10, 1862.—This invention consists in the employment of an inclined plate secured to one of the sashes, upon which are parallel notches extending horizontally across the plate. Upon the other sash is a yoke or clasp which catches into the notches on the said plate, and securely fastens the sashes together so as to prevent their rattling, &c.

Claim.—The application of the yoke, swinging on a hinge, to the inclined plane, provided with notches, thus producing a perfect window-sash fastener, and securing the effects described.

No. 35,524.—HORATIO R. JONES, of Addison, N. Y.—*Improvement in Percussion Cap Primer for Fire-arms.*—Patent dated June 10, 1862.—This invention is designed as an improvement to be applied to a capping tube for which a patent was granted to E. D. Seely October 29, 1861, and it consists in placing in a recess, at the rear end of the tube, a spring catch, so that when the trough is inserted it will be held firmly in its place.

Claim.—The spring catch attached to the rear end of the capping tube to hold the trough or slide in its place, substantially as and for the purposes set forth.

No. 35,525.—O. S. JUDD, of New Britain, Conn.—*Improved Means of Extinguishing Gas Lights.*—Patent dated June 10, 1862.—This invention consists in the employment of a spring applied to turn the cock in the pipe of a gas lamp to extinguish the light, the said spring being controlled by a clock movement so as to shut off the gas at any given time. Attached to the cock is a sector, from which a cord passes to a wheel upon an arbor provided with a coiled spring. The act of moving the cock to turn on the gas winds up the spring, and at the same time causes an arm to catch under a lever latch, where it remains until acted upon by a cam which releases the arm, when the spring turns the cock and shuts off the gas.

Claim.—The sector *c* applied to the gas cock and moved by a spring, or its equivalent, to shut off the gas, when the latch lever *g* is disconnected by the clock mechanism, as and for the purposes set forth.

No. 35,526.—J. W. KINGMAN, of North Bridgewater, Mass.—*Improved Mode of Making Buildings Water-proof.*—Patent dated June 10, 1862.—The nature of this invention is explained by the claim.

Claim.—The new mode of rendering surfaces, &c., water-proof, the same consisting in applying, by rubbing to such surfaces, thin sheets of fibrous materials, first coated with such a paste or cement as will permit water-proof liquids to pass through, and then saturating them with such water-proof liquids as will pass through both the cloth and the paste, substantially as described.

No. 35,527.—SYLVESTER LOUIS, of Rochester, N. Y.—*Improved Mode of Treating Oils and Fats for rendering them more Useful for Burning in Lamps, Lubricating Machinery and other Purposes.*—Patent dated June 10, 1862.—The object of this invention is the production of an improved quality of oil for burning in lamps or for lubricating machinery, by combining any kind of oil or fat, whether animal or vegetable, with naphtha or benzole, and with an agent such as "annatto," previously prepared, which essentially deodorizes those substances, and by which combination they are rendered less volatile, and become non-explosive under ordinary circumstances.

Claim.—The treatment of vegetable and animal oils and fats by the use of benzole or naphtha and annatto combined, substantially in the manner and for the purposes described.

No. 35,528.—LAFAYETTE LOUIS, of Buffalo, N. Y.—*Improvement in Pianos with Melodeon Attachment.*—Patent dated June 10, 1862.—This invention relates to a method of arranging a melodeon tube-board, reeds, and swells above the keys and below the sounding board of a piano-forte in a manner to obtain the effect of two banks of keys or two separate instruments played at the same time. A conducting tube or hollow shaft turning upon journals as a centre, through which the wind passes, and which is operated by a lever connecting with the treadle, is so combined and arranged with a melodeon tube-board and piano-forte as to enable the performer instantly and at pleasure to connect the melodeon tube-board to, and disconnect it from, the piano. A tremolo is also combined with the melodeon tube-board and piano-forte. A compound rotary bellows combining the suction and pressure principles, and both acting in separate apartments in the bellows, is also combined with the melodeon and piano-forte, by which the air, after acting upon the melodeon reeds, may be confined in the bellows or forced out at pleasure, thereby regulating the degree of air pressure upon the melodeon, and also using the air which has acted upon the melodeon reeds for neutralizing and controlling both the suction and pressure power of the bellows, for the purpose of increasing or diminishing the power of the tone.

Claim.—First, the arrangement of a melodeon tube-board (including reeds and swells) above the keys and below the sounding-board of a piano-forte, in the manner and for the purpose and substantially as described.

Second, so combining and arranging a melodeon tube-board with a piano-forte as that the performer can instantly and at pleasure disconnect the melodeon tube-board from the piano-forte keys, in the manner substantially as set forth.

Third, the combination and arrangement of the tremolo G with the melodeon tube-board E and piano-forte, substantially as described.

Fourth, the combination of a compound rotary bellows with a piano-forte and melodeon, the bellows being provided with a valve I^3 for regulating the degree of air pressure upon the melodeon reeds, substantially as set forth.

No. 35,529.—W. W. LYMAN, of West Meriden, Conn.—*Improved Fruit Can.*—Patent dated June 10, 1862.—The stopper is formed with a groove in its edge to receive and hold in place an elastic ring, and when inserted in the can after the heated contents are placed therein, is drawn down into the can as its contents become cool. In order to open the can, a sharp-pointed instrument is inserted between the ring and stopper to form openings for the admission of air to facilitate the removal of the stopper.

Claim.—Producing the openings *e*, in combination with the stopper *a* and ring *b*, substantially in the manner and for the purpose described.

No. 35,530.—E. A. MCALEER and J. SHIVELY, of Canton, Ohio.—*Improvement in Weighing Faucets.*—Patent dated June 10, 1862.—To one end of a barrel or hogshead is attached a plate provided with a spigot and a dovetailed groove, in which works a sliding valve. The front upper part of this valve is perforated to receive the hook of a scale platform. The scale-beam fits loosely at its front end in an opening in one side of the upper part of the sliding valve, and turns on a pivot in a lug cast on one edge of the plate. In the rear of the sliding valve is a valve for regulating the flow of molasses. The jug or vessel to receive the molasses being placed upon the platform, the required amount to be drawn is indicated by the weight upon the scale-beam, so that when the proper amount is drawn, the weight of the molasses in the jug causes the valve to fall and close the spigot.

Claim.—First, the combination with valve C of the platform D and peculiarly constructed weighing scale beam E, substantially as set forth.

Second, the combination of the rear valve *e*, main valve C with the spigot, substantially as and for the purposes set forth.

No. 35,531.—R. W. MCCLELLAND, of Springfield, Ill.—*Improvement in Hubs and Journals for Carriage Wheels.*—Patent dated June 10, 1862.—The hub is composed mainly of a front and rear section, the front section having a recess to receive the tenons of the spokes which are driven in radially so as to brace against each other. The front section has also a shoulder, and beyond it a male screw fitting into a corresponding recess, and female screw in the rear section, so that when the two are screwed together, their flanges securely clamp the spokes, and a spoke may at any time be removed and another inserted without disturbing the other portions of the wheel. In the point and heel of the hub are recesses for the reception of a box composed of three or more sections of any suitable metal, behind which sections are placed adjusting screws for the purpose of setting them up as they wear away against the bearings of the journal.

Claim.—First, in connexion with a cast-iron hub made in two sections, the driving in of the spokes radially into one of the sections, in combination with the shoulder, recess, flanges and screw threads, to brace and bind the two sections to each other and to the arched part of the spokes, substantially as described.

Second, in combination with a cast-iron hub, sectional, adjustable, and removable metal boxes to take the bearings of the journal, substantially as and for the purpose set forth.

Third, in combination with sectional adjustable boxes in the hub, the removable bearings on the journal of the axle, substantially as and for the purpose set forth.

No. 35,532.—J. W. MERRILL and J. H. ROWE, of Boston, Mass.—*Improvement in Feet Warming Apparatus.*—Patent dated June 10, 1862.—This invention consists of a box open in front and formed with two separate compartments for the reception each of a foot case or holder, which latter consists of three separate parts connected together by means of hinges. Their inner surfaces are covered with fur or other suitable substance. Applied to opposite sides of each compartment are springs which bear against the cushioned part to press them in contact with the feet.

Claim.—The separate foot case or cases as combined with and applied to the stand, and made substantially in the manner and so as to operate as described.

No. 35,533.—W. O. B. MERRILL, of Philadelphia, Pa.—*Improvement in Coal-Oil Burners.*—Patent dated June 10, 1862.—This invention consists of a metal plate provided with projections inclining towards the wick and arranged within the perforated casing of a coal oil lamp burner for the purpose of directing a supply of air to the sides and base of the flame.

Claim.—The smoke consumer, composed of a metal plate with the flat projections *f f* and turned-up projections *d d'*, when arranged within the perforated casing A of a coal-oil lamp burner, as and for the purpose set forth.

No. 35,534.—W. O. B. MERRILL, of Philadelphia, Pa.—*Improved Coal-Oil Lamps for Railway Cars.*—Patent dated June 10, 1862.—The chimney of this lamp is composed of glass, having a hollow metallic base firmly secured to it, and also a metal tube at its upper part, each of which is provided with a flanged projection, by which they may be attached to the side of a car or other object. On the lower edge of the metallic base piece is a flange, in the opening formed by which fits a projecting portion of the reservoir, and upon the latter rests a hollow cap to which is secured the dome, having at its top the usual oblong opening.

Claim.—First, the chimney composed of the hollow metal cap B, glass tube A, and metal case C, with the projections E E', or their equivalents, for the attachment or suspension of the chimney to the side or roof of a car or to any other object, in combination with the detachable reservoir D and its burner.

Second, the projections *s s* on the reservoir, in combination with the openings *m m* on the flange *i* of the base C, the spring *c*, its rod *b*, and the stop *a*.

Third, the combination and arrangement of the base C, flange *e*, perforated flange *i*, and perforated cap H.

No. 35,535.—W. O. B. MERRILL, of Philadelphia, Pa.—*Improvement in Lamp Chimneys.*—Patent dated June 10, 1862.—This chimney is composed of a metal base with a projection adapted to the burner of a lamp, and two or more plates of plain glass confined by longitudinal grooved or recessed metal ribs or plates, which plates or ribs are hinged to the metal base and confined together at the top by means of a detachable cap, so that by the removal of the cap, one or more of the glass plates may be removed and replaced at pleasure.

Claim.—A lamp chimney, composed of a metal base A, with an annular projection adapted to the burner of a lamp and two or more plates of plain glass confined by metal ribs or plates, substantially as and for the purpose set forth.

Also, hinging one or two more of the said plates or ribs to the base and confining the same at the top by the attachable cap G, as specified.

No. 35,536.—FRANKLIN MILES, of Rochester, N. Y.—*Improvement in Fanning Mills.*—Patent dated June 10, 1862.—To the rock-shaft, which extends from side to side of the mill between the upper and lower shoes, is attached a metal bearing piece provided with two semi-circular projections on its lower edge, resting in corresponding recesses in a plate attached to the side of the machine for the purpose of producing a sudden concussion of the shoe at each horizontal vibration so as to prevent the sieve from clogging. The grass seed is separated before being exposed to the fan blast by a sieve at the point where the grain is taken from the hopper upon the shoe, in a receptacle, whence it may be discharged through an aperture in the same. The size of the opening in the hopper is regulated by a sliding feed board, to which is attached a guide stem or handle provided with a long flat spring on its under side, both passing through a mortise in the frame of the machine.

Claim.—Compounding the motion of the shoe or shoes, when shaken horizontally, by the addition of the abrupt vertical vibration or jar, by means of the double bearing H of the rock-shaft *c* and the sockets *g g*, substantially as and for the purposes described.

Also, the combination and arrangement of the grass-seed box Q, hopper S, sieve *m*, and fan F, substantially as and for the purposes described.

Also, the feed board L, provided with the guide stem T and spring *u*, when used in combination with the hopper for adjusting and holding the same, substantially as set forth.

No. 35,537.—N. W. NORTHRUP, of Greene, N. Y.—*Improvement in Railroad Chairs and Rails.*—Patent dated June 10, 1862.—This invention consists in forming the rail with similarly shaped flanges upon each edge and a rib at the centre adapted to fit corresponding recesses and shoulders in the chair. The chair is made in two parts or jaws, one of which is stationary and extends to the surface of the rail, and the other is made to fit in between a projecting portion of the stationary part and the rail, the upper portion resting against the under side of the rail flange.

Claim.—A double-headed rail with the ribs or flanges and shoulders, with the chair composed of the two jaws, grooves, flanges, slots, and wedge-shape movable jaw, combined as specified and for the purposes set forth.

No. 35,598.—J. H. NORTON, of Boston, Mass.—*Improvement in Gas Regulators.*—Patent dated June 10, 1862.—This apparatus is composed of two parts or bowls, one above the other. In the upper part is a quicksilver trough and inverted cup, and at the bottom of the same is cast a projecting cylinder having a series of notches on its edge, a central hole opening through the bottom into the chamber above. In the lower part is a chamber, to which the inlet pipe is connected. From the centre of the inverted cup in the upper chamber is suspended a rod secured by screw nuts, and having attached at its lower end a cup M filled with quicksilver. By adjusting the said nuts, the cup M is brought into a position corresponding with the greatest probable pressure to be maintained in the upper chamber, so that the proper amount of opening through the notches above mentioned may be provided to supply the amount of gas required by the number of burners in use at one time.

Claim.—The chamber G, into which the gas is poured from the inlet pipe H, in combination with the valve *f*, communicating with the pressure chamber D, when said valve is commanded by the quicksilver cup M suspended directly from the inverted cup C, substantially as specified.

No. 35,539.—M. P. NORTON, of Troy, N. Y.—*Post Office Way-Bill Envelope.*—Patent dated June 10, 1862.—This invention consists in making a post office way-bill envelope with an opening at one end only to receive letters for transportation, and with a way-bill on the outside of the envelope, and combined therewith by being printed thereon.

Claim.—A post office way-bill envelope, constructed substantially as and for the purpose described and set forth.

No. 35,540.—JONATHAN PARKER, of Biddeford Me.—*Improvement in Churns.*—Patent dated June 10, 1862.—This invention consists in making the dasher with orifices so inclined and arranged within the churn as to produce spiral currents in the cream as the dasher is moved up and down.

Claim.—The dasher, as made, with perforations arranged at an inclination to its faces, to operate in manner substantially as specified.

No. 35,541.—MOSES POND, of Boston, Mass.—*Improvement in Heaters.*—Patent dated June 10, 1862.—In the dome of the furnace are introduced one or more suitably prepared pipes so arranged as to convey the external air up into the dome and over the fire, where it becomes heated, and thence into the air-chamber, where it mingles with the hot air which has been thrown off by radiation. The pipes are so constructed and connected with the furnace as to provide for their contraction and expansion, and obviate the danger of displacement, and also to prevent the gases and smoke from escaping around the pipes into the air-chamber.

Claim.—The upper joint of the pipe, consisting of the cup or its equivalent with the sand, and the collar N with its elongated slots K K', and the rim projecting into the cup or its equivalent, all constructed substantially as above specified and operating as described, so as to allow the expansion and contraction of the pipe, and at the same time by making the joint air-tight to prevent gas and smoke from escaping into the hot-air chamber.

No. 35,542.—PAUL PRYIBIL, of New York, N. Y.—*Improved Tension Regulator for Sewing Machines.*—Patent dated June 10, 1862.—This invention consists in the arrangement of a pulley with a long conical hub (the pulley being rotated by the action of the needle thread) in combination with a screw spindle acting on the conical hub in such a manner that, during the operation of sewing, and consequent decrease of the bobbin thread in the shuttle, the pulley, by the action of the screw, assumes a gradual downward motion, thereby bringing by degrees thicker parts of the conical hub opposite the spring pad, and causing a corresponding increase in the tension of the needle thread. The tension regulating pulley is connected with the screw spindle by an elliptical sleeve, which is attached to a spring, and the front portion of which is left smooth, while that portion of the same which is forced by the spring against the screw is furnished with a screw thread in such a manner that by pulling back said spring, the nut, and with it the pulley, is thrown out of gear with the screw thread on the spindle, and can be moved up and down on the same at pleasure. The thread in the lower part of the said nut is cut away and a recess and shoulder provided in the screw spindle in such a manner that the tension regulating pulley can be rotated on the screw spindle whilst the screw threads are out of gear, and hence are not liable to become injured or worn.

Claim.—First, the arrangement of the friction pulley D with the conical hub E in combination with the screw spindle G and spring pad F, constructed and operating substantially as and for the purpose specified.

Second, the arrangement of the elliptical nut *d* on the spring H, in combination with the screw spindle G and pulley D, substantially as and for the purpose described.

Third, the recess *e* and shoulder on the screw spindle G in combination with the lower part *g* of the nut *d*, as and for the purpose set forth.

No. 35,543.—M. A. RICHARDSON, of Sherman, N. Y.—*Improvement in Machine for Working Butter.*—Patent dated June 10, 1862.—This apparatus consists of a tub, to which a rotating motion is communicated from a shaft outside of the tub. Within the tub is a butter worker, the upper end of which passes through a jointed extension arm, and is provided with a handle, by means of which the worker is made to revolve. The lower portion of the worker is formed with three wings forming concaves, the edges of which press against the sides of the tub and cut the butter into elongated rolls. Attached to a standard upon the platform is a bar, having a lever attached to it, provided with a spring scale for weighing the butter.

Claim.—First, the employment of the tub G, worker H, and shaft D with the arm C and hinged extension C', the several parts being constructed and arranged to operate in the manner and for the purpose specified.

Second, the use of the lever *a* upon which the bottom of the shaft D is situated, or in which it has its bearings, for the purpose of throwing out of gear the lower end of said shaft, as is fully set forth.

Third, the use of the bar L, lever M, and scale N when used with the standard B, as and for the purpose specified.

No. 35,544.—MICHAEL RITNER, of Vincennes, Ind.—*Improvement in Sabot for Projectiles for Rifled Ordnance.*—Patent dated June 10, 1862.—The nature and object of this invention are explained by the claim.

Claim.—A hollow sabot of vulcanized India-rubber, constructed substantially as described, and applied in the rear of a cannon ball or other projectile without enveloping the same or being attached thereto; constituting a cushion to receive the percussive force of the explosion, and adapted to expand by the pressure of the gases so as to effectually prevent their escape.

No. 35,545.—HENRY RUTH, of Summerfield, Ill.—*Improvement in Corn Planters.*—Patent dated June 10, 1862.—In front of the rollers is arranged a curved metal plate having teeth upon its edges for breaking the lumps of earth in pieces. The rollers and plates are arranged in a frame so as to be raised and lowered by means of a crank shaft, when necessary. In the bottom of the hopper box is a longitudinal groove in which the dropping valve is arranged. In the centre of the valve at one edge is fixed an arm which is operated by a cam upon the main axle to open the valve one or more times during the revolution of the axle.

Claim.—First, in combination with the rollers L the toothed, curved plates M arranged in a hinged frame as described.

Second, the cam F in combination with the valve E, constructed and arranged as described.

No. 35,546.—J. L. SATER, of Cincinnati, Ohio.—*Improvement in Planting Machines.*—Patent dated June 10, 1862.—Above the frame of the machine are arranged two grain boxes, the opening in the bottom of each of which is closed by a portion of the periphery of an outwardly opening hollow cylinder which is secured to a rotating shaft. The sides of the hollow cylinders are perforated for the reception of the kernels of grain to be planted. Within the upper half of each hollow cylinder is fitted a segmental block supported by a metallic strap from the frame timber. As the machine moves along, each perforation in either one of the hollow cylinders is brought over the mouth of an oblique perforation in the segmental block through which the kernels of grain pass to the conducting tubes and thence into the furrows.

Claim.—The combination of the hollow, perforated, open cylinders B B with the grain boxes A A, when the said hollow cylinders are combined with the obliquely-perforated segmental blocks D D, and the conducting tubes E E, in the manner and for the purpose substantially as set forth.

No. 35,547.—W. C. SHIPHERD, of Saratoga Springs, N. Y.—*Improved Boot-Crimping Device.*—Patent dated June 10, 1862.—To the under side of a sliding frame is attached a boot-tree, at the rear edge of which are a series of notches directly back of the curve of the tree. The clamp is composed of two parallel metallic plates provided with notches at their upper edges similar to those in the edge of the tree. In each of the notches of the tree is fitted a nut and screw, the screw rods having clasps upon them extending down at each side of the nuts, thus clamping the latter to the tree, by which means the leather is held in a stretched or crimped state, and the tree with the leather upon it may be readily removed.

Claim.—The notches *i*, *o*, made respectively in the tree E and plates *k k* of the clamp G, as shown, in combination with the clamp formed of the nuts *p*, screw rods *p'*, and clasps *q*, all arranged as shown for the purpose of securing the crimped leather to the tree.

No. 35,548.—J. N. SMITH, of Jersey City, N. J.—*Improvement in Repeating Fire-arms.*—Patent dated June 10, 1862.—This invention consists in the employment of a divided breech-chamber, a part of the chamber serving as a charge carrier and breech-pin. The charge carrier is moved backward by a lever to a position for the reception of a charge. The movement of the lever also operates the lock and produces the feed motion; the charges when introduced into the magazine being brought forward automatically by means of two feed-wheels connected by a spring. These feed-wheels have a common axle, one a cord-wheel fixed to the axle, and the other a ratchet-wheel moving freely. The cord from the wheel passes through a hole, and thence along the magazine, where it is attached to a follower, so that the movement of the wheels may act upon the follower and upon the charges.

Claim.—First, ejecting the charge case laterally from the bore of a gun, through an opening made in the side of the bore, in the manner substantially as described.

Second, the employment of the carrier F or its equivalent for opening the gun to introduce the charge, substantially as set forth.

Third, the arrangement of the feed wheels M and N, the same being connected by the spring *j*, and forming a compound wheel for bringing forward the charges automatically and with precision, as specified.

No. 35,549.—J. N. SMITH, of New York, N. Y.—*Improvement in Coal-Oil Lamps.*—Patent dated June 10, 1862.—This invention does not admit of a brief description.

Claim.—The flexible lifting cup L, constructed and operating substantially as and for the purpose specified.

Also, the combination of the flexible lifting cup L and disk J, united and arranged with their apertures *l* and *j j*, substantially as and for the purpose set forth.

Also, the evaporating tank P, with its open aperture *p*, or its equivalent, substantially as described and applied to the lamp for the purpose specified; and this, whether arranged and applied as described, or in any other way combined with a lamp to produce the effects, and for the purposes set forth.

Also, the safety valves F G and K applied to the oil passages, and operating substantially in the manner and for the purposes described.

Also, the employment of a retort for vaporizing the oil at the burner of a lamp, substantially as and for the purpose specified.

Also, the separate oil chamber *r* in the retort, so arranged as to cut off or let on the supply of oil thereto from the oil reservoir at pleasure, substantially as specified.

Also, the separate vaporizing chamber X in the retort, arranged so as to be cut off from or connected with the oil chamber *r*, substantially as set forth.

Also, the retort cap T, arranged so as to regulate or close the flame orifice of the burner, substantially as specified.

Also, the rarefying chamber V, substantially as and for the purposes set forth.

Also, the chamber W, arranged and operating substantially as and for the purpose specified.

Also, the radiating cone U, constructed, arranged, and operating substantially as and for the purposes set forth.

Also, the small auxiliary burner, situated within the rarefying chamber V, substantially as and for the purposes specified.

Also, the double cone Y, arranged and operating in combination with the small burner, substantially in the manner and for the purpose described.

Also, the register plate Z, for controlling the introduction of the draught, air, and vapors into the rarefying and blaze chambers V W in combination therewith, substantially as and for the purposes specified.

No. 35,550.—B. F. SOUTHGATE, of Bridgewater, Vt.—*Improved Sawing Machine.*—Patent dated June 10, 1862.—In the framing of the machine are notches or steps in which are fitted the lower ends of two levers, each having a curved block secured to their inner sides, the curved surfaces of said blocks being made to bear against a friction roller by means of springs. Pivoted to each lever is a pawl which engages with a corresponding ratchet, so that when power is applied to the shaft, a reciprocating motion will be imparted to the slide, and consequently to the saws as they operate on the stuff in the carriages.

Claim.—The levers N N provided with the pawls O and operated from the saw gate or sash, as shown, in combination with the ratchets M M, shafts L, and the cords or chains K, or their equivalents, arranged substantially as shown for giving the feed movement to the carriages I, as set forth.

No. 35,551.—JAMES SPEAR, of Philadelphia, Pa.—*Improvement in Stove Doors.*—Patent dated June 10, 1862.—This invention consists in so constructing the door of a stove or heater that a metal plate may be placed before the mica while kindling the fire, and be easily removed after the fire is kindled, for the purpose of preventing the blackening of the mica during the process of kindling.

Claim.—The combination of the openings *b b'* at the bottom of the door and the opening *a a'* at the top of the frame when in connexion with the mica and metal plate or wire gauze, constructed substantially as described.

No. 35,552.—ALBERT TAPLIN, of Providence, R. I.—*Improved Burner for Coal-Oil Lamps.*—Patent dated June 10, 1862.—The lower rim of the cone is turned upwards and outwards, as shown in the engraving, for the purpose of lengthening out the cone so as to cause a sufficient draught for the flame without bringing it in contact with the chimney, and thus admitting of the use of a short chimney.

Claim.—Turning the rim of the cone upward at A A and outward at B B.

No. 35,553.—JAMES THIERRY, of Aurora, Ill.—*Improvement in Machines for Turning of Grindstones.*—Patent dated June 10, 1862.—This invention consists in combining a circular cutting tool with a spindle fitting loosely in two boxes attached to a frame, which may be adjusted to a grindstone by means of wedges and screws so as to allow the said spindle to form a greater or less angle with a plane passing through two points of the axis of the grindstone and through one point of the axis of the cutting tool. When in operation the cutting tool is moved from side to side, being caused to revolve by contact with the grindstone.

Claim.—The combination of a circular cutting tool C, a spindle D, and a frame F, together with the wedges K K' K'' K''', or their equivalents, with a grindstone turning machine, so constructed that it will operate by the joint effects of its contact with a grindstone in motion, and the inclination of said spindle in relation to said grindstone, as described above substantially.

No. 35,554.—G. M. THOMAS, of N. Y.—*Improved Lemon Squeezer.*—Patent dated June 10, 1862.—This invention is explained by the claim and engraving.

Claim.—A cast metal lemon squeezer composed of two handles A A′, connected at their front ends by a fulcrum pin *a*, and provided respectively with bowls B C, one fitting within the other and below the handles, substantially as described.

No. 35,555.—C. A. WHEELOCK, of Uxbridge, Mass.—*Improved Steam Trap.*—Patent dated June 10, 1862.—The expansion pipe is secured at one end to a wall or any other stationary body and connects with the lower part of the heat radiator, and is so arranged as to be capable of being expanded lengthwise by the heat of the steam in the pipe. The free end of the pipe opens into a valve case whose interior is divided into two chambers by a partition, in which a valve opening and seat are made. While the pipe contains steam, and is free of water, it will be expanded lengthwise by the heat of the steam, and the valve will be closed by its direct pressure; but when the water forms in or enters the pipe the latter will contract and the valve stem will be stopped from moving with the pipe, and consequently the valve seat will be moved away from the valve and the water be discharged through the valve opening, after which the steam will again heat and expand the pipe so as to close the valve. The valve seat, or the same and its exhaust passage, are arranged between the valve and the stuffing-box of the valve stem for the purpose of preventing leakage of steam through the stuffing-box.

Claim.—Improved steam trap, as made substantially as before described, that is to say, not only with an abutment E, and with the valve and stem separate from such abutment, and movable with the pipe, as explained, but with the valve so arranged as to be closed by pressure of the steam and opened by contraction of the pipe, under circumstances substantially as above set forth.

And furthermore, in connexion therewith, the improved arrangement of the valve seat or the same, and its exhaust passage relatively to the valve stem and its stuffing-box, whereby the latter is separated or insulated from the pressure of the steam of the expansion pipe, as specified.

No. 35,556.—E. A. WIBLE, of Georgetown, Cal.—*Improvement in Preserving Grapes and Other Fruit.*—Patent dated June 10, 1862.—This invention is explained by the claim.

Claim.—The packing of fruit sprinkled with powdered alum in layers, between layers of dry sand, in air-tight boxes, substantially as specified.

No. 35,557.—G. G. WOLFE, of Troy, N. Y.—*Improvement in Stoves.*—Patent dated June 10, 1862.—Within the fire cylinder is arranged a partition plate, which extends from the bottom plate of the base upwards to a point near a collar upon the fire cylinder, where an opening is made to admit of the passage of the hot air into the rear broad flue.

Claim.—The combination of the partition F with the fire cylinder B, substantially as described and set forth.

No. 35,558.—W. A. WOOD, of Hoosick Falls, N. Y.—*Improvement in Harvesters.*—Patent dated June 10, 1862.—The object of this invention is to render a harvesting machine easily convertible from a reaper to a mower, or *vice versa*, and capable of being made rigid for reaping grain and flexible for cutting grass. The platform and finger bar are united to the main frame by the rod or bar *c* bent up vertically at one end. To the platform bar is bolted a plate, to which is hinged a rod *e* extending upwards and resting on a plate fastened to the main frame, where it is rigidly held by a clip which enters one of a series of adjusting notches in the rod. At the outer end of the rod *c* is a crank or arm which can be adjusted on the rod by means of holes through which and corresponding holes in the rod *c*, a pin or bolt may pass to set the arm at any suitable height on the bar.

Claim.—First, uniting the platform to the main frame by the bent rod *a* and hinged rod *e* and their appliances, so that the platform may be raised or lowered on the main frame, substantially as described.

Second, the plate *d*, as forming a hinged support to the rod *e*, and a means of uniting the platform and finger bar, substantially as described.

Third, the device for raising and lowering the outer side of the platform, namely, the sleeve and its adjusting holes on the arm or outside wheel supporter E, and similar adjusting holes in the rod *c*, and a pin or key passing through them, substantially as set forth.

No. 35,559.—A. J. BOWEN, of Baltimore, Md., assignor to Himself and L. K. BOWEN, of the same place.—*Improvement in Tobacco Pipes.*—Patent dated June 10, 1862.—This invention consists in providing the stem with two tubes or channels uniting near the mouth-piece, one leading to the bowl containing the tobacco and the other leading to a detachable receptacle secured to the bottom of the bowl.

Claim.—The two tubes or channels *a* and *b* in the stem in combination with the bowl *c* and cup or receptacle *d*, as set forth.

No. 35,560.—J. E. EVERETT, of Dedham, Mass., assignor to W. EVERETT & Co., of the same place.—*Improved Wringing Machine.*—Patent dated June 10, 1862.—To the end frames

of the rollers are connected side pieces which form a box having its bottom inclined from the ends, and from a longitudinal middle partition towards an outlet on each side. Beneath the lower roll is a trough, furnished at its ends with a lip which slides in a groove across the end pieces or frames, so that it may be moved from one side of the box to the other.

Claim.—The above-described water-conducting attachment for clothes wringers, consisting of the conducting box, with its longitudinal partition c and trough D, which may be moved to either side of the partition, substantially as specified.

No. 35,561.—J. H. FAIRCHILD, of Highgate, Vt., assignor to Himself and C. D. STIMETS, of the same place.—*Improved Sap Bucket for the Manufacture of Maple Sugar.*—Patent dated June 10, 1862.—This invention consists of an ordinary square wooden box, which is prepared for use by first boiling it in a composition of coal or mineral tar and slaked lime, and, when dry, applying a quantity of the above-named composition to joints on the inside of the box.

Claim.—The combination of the cement and box for the specific purpose of catching sap, or a sap bucket to be used in the manufacture of maple sugar.

No. 35,562.—HEZEKIAH CONANT, of Willimantic, Conn., assignor to the WILLIMANTIC LINEN CO.—*Improvement in Machines to Label Thread Spools.*—Patent dated June 10, 1862.—This invention consists of a machine made up of several sets of apparatus, each of which having certain functions and all acting in combination, the nature of which will be understood from the claim.

Claim.—First, the combination of feeding, holding, punching, pasting, applying, and ticket-presenting apparatus, all substantially such as described.

Second, the combination, substantially as described, of feeding, withholding mechanism or apparatus, and these in combination with applying mechanism only substantially such as specified, or in combination with punching out and applying mechanism, substantially such as specified.

Third, punching out and applying mechanism, substantially such as described, in combination with pasting mechanism, substantially as specified.

Fourth, a ticket-presenting apparatus, substantially such as described, in combination with punching and applying mechanism, substantially such as specified.

Fifth, the combination of punching with applying mechanism, each having a mode of operation substantially as set forth.

Sixth, in combination with ticket-presenting mechanism, substantially such as described, a holding mechanism, substantially such as specified.

Seventh, in combination a rack, a bolt and a frame provided with projections, all substantially such as specified and operating as described.

Eighth, in combination a carriage, a rack, and a bolt, substantially such as described, in combination with a frame having projections thereon, as specified.

Ninth, in combination a rack, a carriage, and a bolt, and two pawls provided with proper mechanism, substantially such as described, for causing them to act alternately, as specified.

Tenth, a feeding trough adjustable toward and from a gate, substantially as described, in combination with a forked gate, whose range of motion is adjustable, whereby the same holding mechanism may be adapted to hold and centre articles of different size.

Eleventh, in combination with a trough or lower support for a spool or similar article, two forked gates, each having an independent downward motion, substantially as specified, whereby articles of different diameter at opposite ends may be more accurately held when acting in combination with proper mechanism for applying labels or tickets thereon.

Twelfth, in combination ticket-presenting, punching, applying, and pasting mechanism, all substantially such as described.

No. 35,563.—GEORGE COOK, of Bristol Station, Ill., assignor to Himself and WILLIAM SCARLETT, of Aurora, Ill.—*Improvement in Harrows.*—Patent dated June 10, 1862.—This machine is composed of a series of cross-beams provided with teeth on their under sides, and connected to each other at their upper and lower edges by means of links and eyes, by which they are kept parallel with each other. By means of a lever extending over the machine from front to rear, in connexion with rods or links pivoted to the centre of the lever and to the rear of the machine, the cross pieces and teeth may be inclined so as to relieve the harrow of obstructions, and prevent it from being clogged by sods, &c.

Claim.—First, inclining the teeth of a harrow at the will of the operator, so as to discharge the obstructions accumulated therein, and restoring the same to their positions for working, without lifting the harrow, all substantially in the manner set forth.

Second, the arrangement of the teeth A, beams 1, 2, 3, &c., eyes C C′ and D D′, and any suitable force for extending and contracting the same, so as to operate as set forth.

Third, the employment of the lever F and links H, as arranged, relatively to the beam 1, 2, 3, &c., and to the eyes C C′ and D D′, and links *c* and *d*, as to operate as set forth.

Fourth, the uniting or connecting of the rods H to an eye G, which is higher than the eye or steeple E, to which F is connected, so that the extending and contracting force applied to the harrow by the elevation and depression of F shall act diagonally in the vertical plane, as set forth.

Fifth, connecting the lever F and the drag link B to a point E forward of and lower than

links which are pivoted to the legs upon each side of the bar

Fifth, connecting the lever F and the drag link B to a point E forward of and lower than the centre of the front beam 1, substantially as and for the purpose set forth when the parts are arranged relatively to the several other cross beams 2 3, &c., and their connexions, and to the links or bars H, as shown.

Sixth, securing the lever F in different positions by means of the notches *i i'*, in the posts I, in combination with the other parts, substantially as represented, for the purpose of holding the teeth firmly in the several positions desired for working in various soils.

No. 35,564.—J. R. HYDE, of Troy, N. Y., assignor to CHARLES EDDY & Co., of the same place.—*Improvement in Stoves.*—Patent dated June 10, 1862.—This invention consists in adjusting a boiler to the back or side of a stove by means of projections at or near the upper part of the stove into which fit pins on the side of the boiler, so as to cause the latter, by the weight of the water, to be kept in contact with the heated side of the stove.

Claim.—The suspending of the said boiler D at the upper corners thereof next adjoining the stove, by means of the brackets *b b* in combination with the brackets *c c* projecting from the said boiler D into the recess *a* of brackets *b b*; so that, by the weight of the water in the said boiler, it will be brought into close conjunction to and with the stove thus connected with said boiler, substantially as described and set forth.

No. 35,565.—LUKE KAVANAUGH, of Waterford, N. Y., assignor to Himself and GAGE, CAMPBELL & GAGE, of the same place.—*Improvement in Burrs for Knitting.*—Patent dated June 10, 1862.—This invention consists in holding a series of separable wings fast in oblique radial slots in the hub by means of two detachable rings or plates engaged with and clamped against the ends of the obliquely arranged wings in the hub, so that, by simply unfastening and disengaging one or both of the said clamping plates from the end or ends of the ring, any one or more of the same can be readily removed from the hub and a new wing or wings inserted; and so that the burr can be altered into one of a coarser gauge, by merely transferring to a suitable hub a sufficient number of the wings, and the said end-plates with their clamping devices.

Claim.—A rotary knitting burr having removable wings A held stationary within oblique radial slots *b* in a hub *c* by means of detachable rings or disks D D engaged with and clamped against the ends of the wings, substantially as set forth.

No. 35,566.—JAMES MCNAMEE, of Easton, Pa., assignor to Himself and H. F. STECKEL, of the same place.—*Improvement in Registers for Bar Rooms.*—Patent dated June 10, 1862.—This invention consists in the employment of a box provided with a ball receptacle and a series of compartments which are numbered and provided with a tilting bottom placed over a draw, which latter receives the balls inserted in the compartments by the customers, and which indicates the number of drinks that have been dealt out by the bar-keeper, the object being to serve as a check to the bar-keeper through whose hands the money passes into the till.

Claim.—The box A, provided with the numbered compartments B, having a tilting or movable bottom D', in connexion with the drawer E, also placed in the box A, and arranged with the compartments B, substantially as and for the purpose specified.

Also, passages D, numbered as shown at the front of the box A, and provided with the the inclined bottoms *b*, when said passages are used in connexion with the numbered compartments B, tilting or moving bottom D', and drawer E, for the purpose set forth.

No. 35,567.—STUART PERRY, of Newport, N. Y., assignor to C. H. A. CARTER, of New York, N. Y.—*Improvement in Horse Powers.*—Patent dated June 10, 1862.—To the inner end of the traction wheel shaft is fastened a hollow or cup-shaped gear wheel that will slide and work over a rocking journal box so as to bring the latter at or near the centre of the said gear wheel. This cup-shaped gear wheel is provided with square teeth or cogs which mesh with and turn a compound square and bevel wheel supported upon an axis, and through a series of gearing, communicate motion to the machinery to which it is applied, so that the traction wheel may run upon the uneven surface of the ground or an uneven track, its shaft being allowed to rise and fall without injury to the gearing.

Claim.—Supporting the end of the shaft B in or near the centre of the main drive wheel E, for the purpose substantially as described.

Also, in combination with a main drive shaft that has upon its outer end a wheel that may run over an uneven track, the hanging of the opposite end in a rocking or pivoted box, to yield thereto, substantially as described.

Also, in combination with a main drive wheel E and the bevel pinion *g* the compound pinion F, composed partially of square and partially of bevelled teeth, substantially as and for the purpose set forth.

No. 35,568.—GEORGE POTTS, of Yocumtown, Pa., assignor to Himself, JOSEPH, and WILLIAM, and A., and J. R. POTTS, of the same place.—*Improved Washing Machine.*—Patent dated June 10, 1862.—This invention consists in the employment of a rubber provided with handles extending up at one end and attached at the other end to a rock shaft mounted upon

links which are pivoted to the legs upon each side of the box containing the water and clothes, so that the rubber may be freely vibrated upon the rollers near the bottom of the box.

Claim.—The combination and arrangement of the vat A, links G G, rock shaft I, and levers E E, firmly or rigidly fastened to the rubber D, substantially as described for the purposes set forth.

No. 35,569.—J. M. SANBORN, of Hardwick, Vt., assignor to Himself and E. M. GIFFORD, of Wolcott, Vt.—*Improved Portable Milk Cooler.*—Patent dated June 10, 1862.—This invention consists in the employment of a portable metallic vessel composed of a tapering tube closed at its largest end and bent at its outer end, upon and communicating with which, at their lower ends, are three tubes, which latter also communicate at their upper ends with a transverse pipe of a considerably larger diameter, surmounted by a funnel containing a strainer of wire cloth. This apparatus is placed within a tub containing cold water, the point of the tapering end fitting in an aperture near the bottom of the vessel. The milk is poured into the funnel, and in passing through the apparatus is exposed to a large amount of cooling surface.

Claim.—The new article of manufacture described, adapted to the filtering of milk or other liquid through water so as to change its temperature and to be readily applied to and removed from an ordinary vessel, substantially as and for the purpose set forth.

No. 35,570.—RUFUS SIBLEY, of Greenville, Conn., assignor to SAMUEL MOWRY, of the same place.—*Press for Photographs.*—Patent dated June 10, 1862.—This invention consists in the use, in connexion with a suitable bed, of a polishing roll set and turning in a travelling truck or carriage, and guided and controlled by ways and screws to regulate the necessary pressure between the roll and bed, for the purpose of pressing photographic pictures.

Claim.—In combination with the bed and rails the travelling truck or carriage and the polishing roll operating in connexion therewith, substantially in the manner and for the purpose described.

No. 35,571.—J. E. SMITH, of New York, N. Y., assignor to Himself and C. T. and J. N. CHESTER, of the same place.—*Improvement in Electro-magnetic Telegraphs.*—Patent dated June 10, 1862.—This invention consists chiefly in an arrangement and combination of register or sounder magnets with receiving magnets in a main telegraphic circuit, wherein the current of the main circuit used to actuate the register or sounder magnet is controlled and regulated by the receiving magnet, the vibrating armature lever of which is arranged to act as an automatic switch for the purpose of relieving the register or sounder magnets from the action of the escape or abnormal currents when the main circuit is opened.

Claim.—The combination of electro-magnets in a main telegraphic circuit, substantially as described, whereby the vibrating armature lever of the first or receiving magnet is made to discharge or neutralize the escape or abnormal currents flowing through the second or working magnets when the main circuit is opened in the operation of telegraphing, substantially as set forth.

No. 35,572.—R. M. TREAT, of Morris, Conn., assignor to Himself and G. H. DALEY, of the same place.—*Improvement in Horse Rakes.*—Patent dated June 10, 1862.—In this machine the shafts are boxed or fitted to intermediate journals on the axle and so as to turn. From the rear of the axle to which they are rigidly attached, and beyond the circumference of the wheels, extend two bars, to the ends of which is attached a rake head provided with short spring teeth. From the sides of the standards which extend up from the shaft and support the seat are pivoted curved rods extending back beyond the rake head eccentrically to the axle, and on the outer ends of these bars is hung a long bar provided with stops, which pass between the teeth of the rake, so that when the raker is turned up, the hay collected upon the teeth is discharged.

Claim.—First, the rigid bars *d d*, or their equivalent, extending out from the back of the turning axle A *a b* beyond the rear of the circumference of the wheels, for supporting a long raker with short teeth, in the manner and for the purpose as described.

Second, the swinging adjustable clearer or discharger G, arranged and operating substantially in the manner and for the purpose described.

Third, the raker F in combination with the curved eccentric rods *g g* and discharger or clearer G, constructed and operating substantially in the manner and for the purpose described.

Fourth, the arrangement of the wheels C C, axle A *a b*, shafts B B, seat D, bars *d d*, and raker F with hand lever H, in the manner and for the purpose described.

No. 35,573.—W. H. WILLARD, of Cleveland, Ohio, assignor to SARAH E. WILLARD, of the same place.—*Improved Apparatus for Adjusting Propellers relatively to the Draught of Water.*—Patent dated June 10, 1862.—This invention consists in the employment of an oscillating bed plate, upon which the engine and machinery are placed, and providing the stern post of the vessel with a slot and sliding packing box so as to admit of the adjustment of the propelling wheel to the draught of water, by submerging or raising the socket to suit the draught of the vessel. In a groove on the under side of the keel, and secured to the same by a joint, is a fender or guard, to the rear end of which is attached a slide moving in a groove in the rudder post, for the purpose of protecting the propelling wheel.

Claim.—The combination of the oscillating bed plate A, rotating packer B, and guard or

No. 35,579.—HENRY BEHN, of New York, N. Y.—*Improvement in Coal Oil Lamps.*—

Claim.—The combination of the oscillating bed plate A, rotating packer B, and guard or fender V, constructed substantially as described and for the purposes set forth.

No. 35,574.—SMITH GROOM, of Troy, N. Y.—*Improvement in Stoves.*—Patent dated June 10, 1862.—The nature of this invention is explained by the claim.

Claim.—The introduction of highly heated steam into the fire chamber by means of annular chambers or pipes surrounding the said fire chamber on the inside thereof, and having therein apertures through which such steam or hydrogen is admitted into the fire around the outside thereof, whereby combustion is greatly aided and the fuel economized, substantially as described and set forth.

No. 35,575.—JAMES MCCHOLLAND, of Reading, Pa.—*Improvement in Giffard's Injector.*—Patent dated June 10, 1862.—This invention consists of a chamber enclosed in a metal casing and provided with three projecting branches *a b c* in combination with an internal nozzle. The latter consists of a tube having throughout a greater portion of its length an even bore, but diminishing gradually in diameter with a gentle curve from a point near its end to the same. The nozzle is screwed into a branch *a*, projects through the chamber above named, and penetrates a short distance into the interior of a branch *c*, the extent of the penetration being limited by the collar of the nozzle. On the outer end of the latter is cut a screw thread adapted to an ordinary cock, which, being connected to the steam pipe, serves to regulate the flow of steam through the nozzle. A similar cock connected to the water pipe is screwed upon the end of the branch *b*, and serves to regulate the admission of feed-water to the chamber. The branch *c* is connected directly to the boiler and with a pipe leading to the tender of a locomotive.

Claim.—The chamber A with the branch *c* communicating with the boiler and branch *b* for the water, in combination with the nozzle B for the steam; the whole being formed and arranged substantially as and for the purpose set forth.

No. 35,576.—W. V. ADAMS, of New York, N. Y.—*Improvement in Shackles or Handcuffs.*—Patent dated June 17, 1862.—This device consists of two curved sections pivoted together at their upper ends and provided with a locking apparatus, so arranged as to render the shackle adjustable in size. Upon the pivot that secures the two sections together is a hasp, through the eye of which passes the link of the connecting chain.

Claim.—The combination of the hasp E with the sections A and B, for the purpose of allowing to each one of a pair of shackles a motion independent of the other when in use, as described.

No. 35,577.—WILLIAM D. ANDREWS, of New York, N. Y.—*Improved Reciprocating Pump.*—Patent dated June 17, 1862.—This invention consists in the employment of a compound piston, or one provided with two valves opening in opposite directions in a right line, and used in connexion with a water-tight partition or abutment placed within the pump cylinder and in such relation with the two piston valves, the eduction or discharge opening and water passage communicating with the pump cylinder, that by a simple reciprocating movement of the piston, each valve will alternately propel the stream in the same direction through the pump, and each valve during its reverse movement allow the stream to pass freely through it, thereby operating with a moderate expenditure of power and admitting of a rapid movement.

Claim.—The compound piston, or one formed of two parts D D′, each provided with a valve E, in combination with the partition or abutment B in the pump cylinder A, the water passage F, and the induction and eduction openings H G, when arranged to operate as and for the purpose set forth.

No. 35,578.—S. L. AVERY, of Norwich, N. Y.—*Improvement in Water Elevators.*—Patent dated June 17, 1862.—This invention consists in an arrangement of mechanism connected with the crank for operating the windlass, by means of which the bucket may be readily raised and lowered and its contents discharged.

Claim.—The annular outer flanch *a* and the interior ratchet wheel *b*, which respectively project from the outer face of the metallic head E of the windlass shaft, when the said parts have substantially the proportions and are used in the manner and for the purpose set forth.

Also, the jointing of the branched crank lever F with the movable head D, when the said head is combined with the rigidly secured head E of the windlass shaft in such a manner that the ratchet tooth *c*, on the branch arm *k* of said crank lever, can be made to operate in conjunction either with the ratchet wheel *b* or the annular flange *a* of the aforesaid head, in the manner set forth.

Also, the arrangement of the forked holder *g*, the spring *h*, and the branch arm *j* of the jointed crank lever F, with each other, and with the head D and the annular groove near the end of the windlass shaft, substantially in the manner and for the purpose set forth.

Also, the arrangement of the hook-headed pall *n* with the metallic head D, when the said head is jointed to the branched crank lever F, and when these said parts are combined with the head E of the windlass shaft, substantially in the manner set forth.

No. 35,579.—HENRY BEHN, of New York, N. Y.—*Improvement in Coal Oil Lamps.*—Patent dated June 17, 1862.—This invention consists in providing a burner with a gas chamber between its upper and lower wick tubes. Near the lower part of this chamber are openings communicating with small pipes or tubes for conducting the gases from the said chamber, so as to prevent the lower wick tube from becoming heated. One side of the upper wick tube is disconnected from the other side, so as to act as a spring upon the wick, and is provided with a wedge to press it against the wick to retain the latter in position.

Claim.—First, the arrangement of the gas chamber *d* between the upper and lower wick tubes *n* and *b* in combination with the tubes or pipes *m m*, in the manner and for the purpose substantially as described.

Second, the construction of the upper end of the gas chamber *d*, forming the upper wick tube *n* provided with a wedge *p*, or its equivalent, in the manner and for the purpose specified

No. 35,580.—EBENEZER BICKFORD, of Ogden, N. Y.—*Improvement in Apparatus for Smoking Meats.*—Patent dated June 17, 1862.—This invention consists in conveying the smoke into a smoke-house of ordinary construction from an outer stove or generator by means of a pipe placed near the bottom of the smoke-house. In the under side of this pipe is a longitudinal slot or opening, extending nearly or quite its whole length, from which the smoke is allowed to escape freely and equally without carrying up any sparks or soot.

Claim.—In combination with the smoke-house A the conducting and distributing pipe L provided with an opening *d*, or its equivalent, extending nearly or quite its whole length, when the same is used to convey and distribute the smoke from an outer stove or generator, substantially as described.

No. 35,581.—JACOB BICKHART, of Harlan, Ind.—*Improvement in Portable Fences.*—Patent dated June 17, 1862.—This invention consists in the arrangement of braces having V-shaped edges fitting in corresponding notches in the edges of the posts near to their upper ends, in combination with a cross-brace, the ends of which form hooks and catch over the lower edges of the said cross-brace, and with a wedge and semicircular gib, in such a manner that by the action of the cross-brace on the lower ends of the braces, the upper ends of the posts are held together, and by the action of the semicircular gib and wedge, which forces the cross-brace down, the lower ends of the posts are prevented from spreading.

Claim.—The arrangement of the wedge *d*, gib *e*, and hooked cross-brace D, in combination with the braces C C′ and notches *a a′* in the upper ends of the posts B B′, all constructed and operating substantially in the manner and for the purpose shown and described.

No. 35,582.—S. J. REEVES, of Philadelphia, Pa.—*Improvement in the Construction of Columns, Shafts, Braces, &c.*—Patent dated June 17, 1862.—This invention is explained by the claim.

Claim.—Uniting together three or more pieces of wrought-iron, made with flanges in the direction of their length, so that they shall form a column or shaft to be used as posts and also as braces or compression cords in the construction of buildings, bridges, piers, or other structures.

No. 35,583.—HENRY BOGEL, of Watertown, Wis.—*Improvement in Velocipede Vehicle.*—Patent dated June 17, 1862.—This invention consists of an arrangement of treadles and levers with connecting rods and running gear, in such a manner that the vehicle may be readily propelled and guided by the occupant. Connected with the above are a bellows and whistle, arranged in such a manner as to be operated by the running gear of the vehicle, so that an alarm may be sounded at the will of the occupant.

Claim.—First, the arrangement and combination of the treadles N N, levers and handles O O Q Q, and crank axles A B, in connexion with the semicircular rack bar F and wheel G, all arranged for joint operation as and for the purpose set forth.

Second, the clamps or levers S S and spring T, in connexion with the bar R on the shaft H, arranged substantially as shown, to prevent the casual turning of the front axle A, as specified.

Third, the bellows U provided with the whistle V, when used in combination with the treadles N N and levers Q Q, and operated by the crank axle B, substantially as and for the purpose set forth.

No. 35,584.—C. H. BROWN, of Fitchburg, Mass.—*Improvement in Feed Regulators for Steam Boilers.*—Patent dated June 17, 1862.—This invention relates to that class of boiler feed regulators which effect the movement necessary to set the feed pump in operation or produce the suspension of its operation, by means of the expansion and contraction of a pipe which is arranged at the intended water level of the boiler, and which receives from the boiler either steam or water according as the water therein is above or below a certain level; and the invention consists in the employment of two levers connected with each other by a link and jointed separately to the expanding pipe, one of which levers works upon a fulcrum pin attached to any fixed support, so that the feed pump is readily thrown into gear and made to

open the valve by which the pump is put in operation, and as the pipe cools and contracts, the motion of the levers is reversed and the operation of the pump stopped. A cold water reservoir is combined with the expanding pipe for producing a copious flow of water to cool and cause its contraction.

Claim.—First, having both of the levers E F jointed separately to the expanding pipe A, said joints being arranged upon opposite sides of said pipes, in combination with the fulcrum D and the link G, as and for the purpose shown and described.

Second, the employment of the cold water reservoir I in combination with the expanding pipe A and lever F, substantially as and for the purpose shown and described.

No. 35,585.—A. BUCKWALTER, H. BUCKWALTER, and J. H. BUCKWALTER, of Kimberton, Pa.—*Improvement in Brick Machines.*—Patent dated June 17, 1862.—This invention consists in a method of feeding the moulds to the press, whereby the feeding mechanism is placed under the complete control of the operator and the feed movement rendered capable of being stopped at once in case of the moulds meeting with any resistance that would be liable to injure them or any of the working parts of the machine. Means are also provided for feeding the clay to the moulds and pressing the same in the moulds, whereby the pressure cannot exceed a certain limit, thus preventing the moulds from being injured by an undue pressure and uniformly pressing the clay therein. A reciprocating planer, provided with metal plates or scrapers, is also employed for facing off the moulds after they are discharged from underneath the press box. The said plates are kept free from clay by means of cleaners which pass over the plates at each vibration of the planer. In connexion with the above is a water tank provided with a cock, to which an elastic tube is attached leading into a trough over the planer, and from the said trough extend pipes down at each side of the planer to the plates.

Claim.—First, the feeding bar G provided with the rack *i*, and having the weight M attached, in combination with the pinion H and toggle K, all arranged as and for the purpose specified.

Second, the drops V, arranged as shown, to yield or give to obstructions in the moulds as the latter are forced out from underneath the box or hopper, as described.

Third, the reciprocating planer Z, provided with the adjustable plates or scrapers *b' b'*, to operate as set forth.

Fourth, in combination with the plates *b' b'* the cleaners A'' A'', arranged as shown, to operate as and for the purpose specified.

Fifth, the water tank E' and trough H', the former being connected with the latter by an elastic tube G and the trough H', provided with pipes K', all arranged as shown, to operate in connexion with the reciprocating planer Z, for the purpose set forth.

No. 35,586.—C. B. COGSWELL, of Essex, Mass.—*Improvement in Horse Rakes.*—Patent dated June 17, 1862.—Each of the journals of the rake shaft or head is supported by a hanger, which projects from one or two slides or blocks supported by and capable of sliding up and down freely between two parallel and upright guides. Between these guides the rake shaft is clasped by two intermediate hangers depending from the front bar of the carriage. By means of a lever, which clasps the shaft of the rake, the teeth of the said rake are pressed down and caused to turn and thus discharge the hay which has been collected in front of the teeth.

Claim.—The arrangement and combination of the journal slides C C, the intermediate hangers E E, and the lever F, and its catching mechanism G, with the carriage and the revolving rake, the whole being so as to enable the rake head to operate substantially as specified.

No. 35,587.—A. B. COOLEY, of Philadelphia, Pa.—*Improvement in Mode of Discharging Projectiles.*—Patent dated June 17, 1862.—This invention consists in the employment of a solid cylinder fitted into an orifice in a shot or shell, and combined with a bell-shaped shield surrounding the stem of the cylinder, for the purpose of obstructing the injurious products of the ignition of the powder contained between the end of the orifice in the said shot or shell and the end of the cylinder.

Claim.—The solid cylinder *b* adapted to fit into the shot or shell A, and combined with the shield *d*, substantially as and for the purpose set forth.

No. 35,588.—JOHN COPELAND and G. P. MARTIN, of Quasqueton, Iowa.—*Improvement in Churns.*—Patent dated June 17, 1862.—This invention consists in an arrangement of inclined scoops on the inner surfaces of a rotary polygonal tub, in such a manner that by the action of the said scoops, the cream is carried up and thrown alternately against the heads or ends of the tub. Through one of the trunnions of the rotary tub passes the stem of a T-shaped tube, its cross tube being placed vertically in the interior of the tub and pressed against the inner side of the head and against a leather washer or other suitable packing placed between it and the head, so that the escape of cream through the head and trunnion of the tub is prevented, and at the same time the external air has free access to the interior of the tub.

Claim.—First, the arrangement of oblique scoops G on the inner surfaces of the sides of a prismatical rotary tub A, constructed and operating substantially as and for the purposes described.

Second, the T-shaped air tube H passing through one of the trunnions C of the rotary tub A, in combination with the spring *c* and packing ring *d*, constructed and operating substantially as and for the purpose specified.

No. 35,589.—J. M. DILLON, of Wheeling, Va.—*Improved Centrifugal Governor.*—Patent dated June 17, 1862.—This device is composed of a central chamber secured to and surrounding a vertical rotary shaft, to which motion is imparted from the engine or other motor, and having attached to it, by hollow arms, other chambers arranged at suitable distances from the said shaft. These chambers contain mercury, which is caused, by centrifugal force developed by their revolution with the shaft, to be driven in greater or less quantity from the central into the other chambers according to the velocity of their revolution. Within the central chamber and above the mercury is arranged a float or flexible diaphragm which is caused to fall and rise with the mercury in the said chamber, and so, by means of suitable connexions, to operate upon the regulating valve of the engine or motor in such a manner as to give it a greater or less opening according as more or less mercury is expelled from the said chamber, and thus regulate the speed of the engine.

Claim.—The governor, composed of the revolving chambers B D D, connected by hollow arms C C and the diaphragm E, or its equivalent, the whole combined and applied, in connexion with the regulating valve, substantially as specified.

No. 35,590.—W. W. DINGEE and A. B. FARQUHAR, of York, Pa.—*Improvement in Grain Separators.*—Patent dated June 17, 1862.—This invention is designed as an improvement upon the grain separator patented to Peter Geiser, October 9, 1855, and consists in securing the drum in its proper position by means of grooves through which pass projections cast on the movable plate used in Geiser's machine. The plates on each side of the fan are connected on the outside of the fan by an iron rod passing through the projections on the movable plate, and adjusted by means of nuts. A part of the tailing trough is enlarged, and in this enlarged part is made to enter a revolving block strap or endless slatted apron which carries the tailings up through a trunk into a spout leading to the thresher. A bag-holder is arranged at the end of a trough to hold a bag for the reception of the cleaned grain.

Claim.—Securing the drum of the fan in its proper position by grooves C C cast in perforated side-plates A.

Also, connecting the movable plates E, by the rod G, on the outside of the fan.

Also, the combination of the trough O, screen N, and trunk S, with the revolving block strap R, when made and operated as set forth.

Also, bag-holder L, when made as described.

No. 35,591.—WILLIAM DONNAN, of Burgettstown, Pa.—*Improvement in Stock Gates for Water-courses.*—Patent dated June 17, 1862.—This invention consists in placing in an upright position a series of teeth in a cross-piece, which latter is designed to rest upon the bottom of a brook. One end of the said cross-piece is attached to a box, and so operated by means of a lever and spring or weight as to allow the teeth to yield to the pressure and passage of drift-wood, and to cause them to return to a perpendicular position, to prevent the passage of stock.

Claim.—The arrangement of a rake-shaped gate, with its head piece close to the bottom of the brook, and operated on by means of the lever *e* and spring *m* or weight *w* inside of the metal box *f* or wooden box *b*, substantially as and for the purposes set forth.

No. 35,592.—ANDREW DOUGHERTY, of Brooklyn, N. Y.—*Improved Paper-cutting Machine.*—Patent dated June 17, 1862.—This invention relates to the cutting of paper into sheets either as it is drawn from a roll or as it passes from a paper machine, and it consists in combining the mechanism for operating the knives, which cut the paper, with the feed rollers, or their equivalents, (which deliver the paper to the knives,) by means of cam-formed cogged wheels, the large radius of one of which corresponds with the small radius of the other, the combination being such that while the knives are cutting, the speed of the paper is reduced to a minimum, and need not be more than sufficient to compensate the bevel of the knives, so that the sheet is cut squarely across its breadth, but after the cut is effected, the speed is progressively increased to a maximum, and then progressively decreased to that required during cutting, the average speed being that at which the paper must be delivered. In connexion with the above is an intermittent clamp, which gripes the paper at the time the cut is made by the knives, and prevents its movement, so that the paper is at rest while the knives are cutting, but at other times releases the paper, and permits it to move freely through the machine, so as to enable the paper to be cut in a straight line across the sheet. Combined with the cutting mechanism is a bellows for producing a blast of air to blow the end of the paper from the stationary knife, so that it may pursue its proper course through the cutting machine, and prevent the end of the paper from which a sheet has been cut from adhering to the stationary knife.

Claim.—The combination of the mechanism for cutting the paper with the feed rollers for delivering it to be cut, by means of cam-formed cog-wheels, substantially as set forth.

Also, the combination of the mechanism for cutting the paper, the feed rollers, the cam-formed cog-wheels, and an intermittent clamp, substantially as set forth.

Also, the combination of the knives of a paper-cutting machine, with a bellows for producing a blast of air to detach the paper from the knives, substantially as set forth.

No. 35,593.—J. J. DRESBACH, of Circleville, Ohio.—*Improvement in the Exploding Device of Shells.*—Patent dated June 17, 1862.—This invention consists in the employment of a sliding exploder, which is controlled by a yielding friction induced by a spring, or its equivalent, between it and the guide or plunger tube in which it works, and by the wedging impact of the exterior of the plunger against the interior surface of the conically formed portion of the plunger tube, such friction being sufficient to withstand the rebound of the plunger which occurs when the projectile is fired from the cannon, and likewise to retain the plunger out of contact with the cap-nipple until the projectile is suddenly arrested in its flight.

Claim.—In combination with an exploding projectile, a plunger tube E, having a tapered portion E′ and a conical spring plunger H working therein, substantially in the manner and for the purpose set forth.

No. 35,594.—LEMUEL ENSIGN, of Millburn, N. Y.—*Improvement in Fanning Mills.*—Patent dated June 17, 1862.—This invention consists in providing the cockle-riddle with a plate attached to its under side, upon which a spring hammer is caused to strike by means of the hopper, the lower edge of which as it vibrates longitudinally passes over the curved part of the spring hammer, the object being to keep the riddle clear and allow a free passage of the chess into the hopper.

Claim.—The arrangement and combination of the riddle R‴, plate *p*, and spring hammer *s*, substantially as and for the purposes set forth.

No. 35,595.—J. A. FANSHAWE and J. A. JAQUES, of Tottenham, England.—*Improved Steam Generator.*—Patent dated June 17, 1862.—Patented in England October 31, 1861.—This invention consists in subdividing the generator into several narrow water compartments between which are arranged a series of flues of convolute or serpentine form, so as to increase their heating surface.

Claim.—The constructing of steam boilers with a series of distinct narrow water spaces or compartments, combined together side by side, and having provided between them convolute, curved, or serpentine flues or fire and gas passages, substantially as specified.

No. 35,596.—G. P. FARMER, of Philadelphia, Pa.—*Improvement in Envelopes for Sewing Needles.*—Patent dated June 17, 1862.—This invention consists of a strip of paper or other suitable material, into which the needles are stuck and arranged separately from each other; the paper with its needles being permanently attached to a wrapper arranged to fold over and enclose the needles.

Claim.—The holder B and wrapper A, when constructed and arranged for holding the needles and folding over and enclosing the same, substantially as and for the purpose set forth.

No. 35,597.—LYMAN FAY, of Fall River, Mass.—*Improvement in Mode of Securing Railroad Joints.*—Patent dated June 17, 1862.—This invention consists in the employment, in connexion with the two fish pieces which overlap the joint of the railroad rail, of a cast-iron box, having an iron block or follower that fits within the sides of the box and rests upon a packing of suitable elastic material contained in the box. Passing through the box, packing, follower, and fish pieces are bolts, which are tightly screwed so as to compress the packing, which serves to prevent the bolts from turning and hold the fish pieces firmly against the rail.

Claim.—The method, substantially as above described, of securing the fish pieces A B, which overlap and confine the joint *a*, of two railroad rails, viz., the box F and follower G, with the elastic packing H and the bolts E passing through them.

No. 35,598.—W. L. FISH, of Newark, N. J.—*Improved Attachment to Lamp Chimneys.*—Patent dated June 17, 1862.—This invention consists in combining a metallic receiver or vessel with the chimney of a kerosene or other lamp, so arranged as to be readily removed from the lamp for the purpose of heating water. In the bulb of the lamp below the receiver is an aperture to admit of the passage of light into the room.

Claim.—First, a lamp chimney A provided with a receiver B, substantially as and for the purpose shown and described.

Second, the arrangement of the window *e* in the metal bulb *a* of a chimney A, as and for the purpose set forth.

No. 35,599.—OSCAR FALKE, of New York, N. Y.—*Improved Hard Rubber Compound.*—Patent dated June 17, 1862.—This invention consists of a hard vulcanite produced by a peculiar mixture and treatment of sulphuret of antimony, sulphite of soda and India-rubber, gutta-percha, or other vulcanizable gums, so that the same shall be free from any offensive odor.

Claim.—The above-described improved hard vulcanite as a new article of manufacture, when the same is made substantially in the manner and for the purposes set forth.

No. 35,600.—C. M. FRENCH and W. H. FANCHER, of Waterloo, N. Y.—*Improvement in Combined Plough and Gun.*—Patent dated June 17, 1862.—This invention consists in forming the beam of a plough of iron of cylindrical shape, having a bore and provided with a vent at its rear end, so that it may be used as a cannon when desirable.

Claim.—The combined implement described, consisting of the hollow or tubular ordnance beam D combined with the parts B C and A of a plough, substantially as and for the two-fold purposes set forth.

No. 35,601.—DANIEL FOBES, of Boston, Mass., and H. M. HARTSHORN, of same place.—*Improvement in Fire Ladder Apparatus.*—Patent dated June 17, 1862.—This apparatus is composed of a carriage or frame supported upon wheels, upon which are arranged sectional ladders sliding one within another, and elevated by means of an endless chain or belt upon a toothed wheel and guide roller. Applied to the belt is a lifter tooth, which takes into a recessed shoulder upon the lower part of the inner sliding ladder, by which the latter is raised and held in an elevated position by a spring pawl affixed to the main or lower ladder, and entering a notch on the rear of one of the bars of the sliding ladder. To the top of the sliding ladder is hinged a hooked frame or window breaker, so that it may be raised up and allowed to fall against and break the window, the motion being communicated by means of ropes which are attached to the same and extend down to a windlass upon the frame below.

Claim.—The combination of mechanism employed in elevating the ladder sections, the same consisting of the endless chain or band F, the lifter tooth L, the pawl *p*, the tooth shoulder *k*2, and the pawl notch *q*, or mechanical equivalent, applied to the main ladder and each section and operating therewith, substantially as specified.

Also, the combination of the movable hooked window breaker L′ and its operating lines or chains with the extension ladder, the same being to operate in manner and for the purpose, with respect to such ladder, as specified.

No. 35,602.—C. L. FRINK, of Rockville, Conn.—*Improvement in Weavers' Shuttles.*—Patent dated June 17, 1862.—The object of this invention is so to construct a shuttle as to prevent it from splitting by the metal tip or point striking any hard substance when the shuttle is thrown out of the loom, and also providing a means whereby a shuttle of common construction which has been split may be repaired and rendered thoroughly sound. The claim explains its construction.

Claim.—As a new article of manufacture, a shuttle provided at its ends with shanked metal tips B and metallic ferules D, the latter fitting within annular cavities C beneath the surface of the wood, and all constructed, combined and arranged in the manner and for the objects set forth.

No. 35,603.—M. A. GENUNG, of Granville, Ohio.—*Improved Door Bell and Burglar's Alarm.*—Patent dated June 17, 1862.—This invention consists in combining a burglar alarm with a gong-shaped door bell, in such a manner that, upon the door being thrown open to the extent of one inch, an alarm will be sounded. The burglar alarm is placed under the bell, and is put in working order by winding up a spring. A wire is attached to a pin in the door, so that upon opening the latter the wire is thrown off and the spring causes a hammer to make a series of rapid strokes upon the bell.

Claim.—First, the combination of the said attachment on the jamb of the door and the pin connected with the alarm of the bell, substantially as and for the purposes specified.

Second, the arrangement of the springs B C in connexion with lever A and shaft C, by which the lever D and lever E are caused to operate on the shaft F in such a manner as to cause the hammer I to operate on the bell J, substantially as specified.

Third, the bridge hinge Q, by which the bell is supported and opened to wind up the alarm, substantially as specified.

Fourth, the perforated band Y encircling the base and bell rim as a protection, as specified.

No. 35,604.—W. H. GUILD, of Brooklyn, N. Y.—*Improvement in Rotary Pumps.*—Patent dated June 17, 1862.—This invention consists in the employment of a wheel provided with a series of spiral flanches or arms, and fitted upon a horizontal shaft which is placed within a cylindrical case, with the wheel arranged in such a manner that both will have a proper bearing, and suitable provision be allowed for wear, so that the wheel will rotate without any loss from back action or leakage. The induction end of the case is smaller than the other part, thus forming a shoulder within the cylinder against which the smaller end of the wheel bears.

Claim.—The wheel G, composed of a series of spiral arms or flanches *g* connected with a rim *f*, in combination with the cylindrical case A, having two different diameters to form a

shoulder or bearing *b* for the wheel, which, with its shaft E, is fitted within said case, substantially as and for the purpose set forth.

No. 35,605.—C. C. HARRISON and JOS. SCHNITZER, of New York, N. Y.—*Improvement in Lens for Photographic Cameras.*—Patent dated June 17, 1862.—This invention is explained by the claim and engraving.

Claim.—The combination of two sets of cemented lenses, as represented in the accompanying drawings, the exterior surfaces of which shall form part of the same sphere, the axes of which shall be coincident, and the other curves of which shall be so proportioned to the focal distance of the combination, and to the refractive and dispersive powers of the glass used in their construction, that the image found at the focus shall be achromatic, and that said image shall be upon or almost exactly upon a plane without distortion of form, and including a larger visual angle, substantially as before described and represented.

No. 35,606.—W. E. HATFIELD, of Newark, N. J.—*Improvement in Odor Traps for Sinks, &c.*—Patent dated June 17, 1862.—This invention consists in cutting the lower end of a waste pipe at an acute angle, and hinging a flap to the same so as to fit closely the edges of the pipe. At the back of and just above the hinge of the flap is pivoted a weighted lever, which serves to keep the valve closed when no fluid is passing through. The valve is enclosed within a tight box or case.

Claim.—The odor trap, having a valve at such an acute angle as to require but slight pressure to close or open it, when constructed substantially in the manner and for the purpose specified.

No. 35,607.—R. T. HATHAWAY, of New Bedford, Mass.—*Improvement in Raising and Transporting Stone.*—Patent dated June 17, 1862.—This machine is composed of a rectangular frame supported upon an axletree, the bearings of which are bent and are secured to the axle and to a strut by means of bars and plates for the purpose of insuring a strong support. The lifting shaft is supported upon a framing composed of struts, and is operated by means of a series of gear wheels and cranks from one or both ends of the machine.

Claim.—The combination of the bent wheel arms or axles *n n* and bars *r r* with the side pieces *m m*, struts *k k*, plates *s s*, and clips D D, in the manner and for the purpose shown and described.

Also, the arrangement together of the lifting shaft E and its gear wheels in the centre of the framing *f f w w k k*, as shown and described, so that the gearing and the weight to be lifted will always be evenly balanced upon the wheels, as set forth.

No. 35,608.—SAMUEL HELLER, of New York, N. Y.—*Improvement in Attaching Straps to Pantaloons.*—Patent dated June 17, 1862.—This invention consists in securing to the inner side of the pantaloon near the lower end, a folded metal piece provided with holes or eyelets, into which are inserted hooks upon the leather strap that passes under the foot.

Claim.—The described mode of constructing and attaching pantaloons and pantaloon straps, the same consisting in the employment of the parts B C and D E, or their respective equivalents, arranged to operate together in the manner set forth.

No. 35,609.—REMI HENRY, of Morrisania, N. Y.—*Improvement in Pumps.*—Patent dated June 17, 1862.—The pump cylinder, which is open at both ends, is connected to the shell by means of vertical plates and flanches, which serve as partitions to divide the shell centrally, thus forming two compartments which are provided with the proper valves, and by the operation of the piston are alternately filled and discharged.

Claim.—The arrangement of the partitions *c c* with the cylinder B, pipes *a b*, and the shell A, in the manner shown and described.

No. 35,610.—L. L. HILL, of Hudson, N. Y.—*Improvement in Making Illuminating Gas.*—Patent dated June 17, 1862.—This invention consists in charging a retort with billets of wood, distilling off the wood spirit and gas, and then letting in upon the fresh, hot charcoal, a stream of petroleum and a stream of water, the heat under the retort being continued. These liquids are decomposed by the charcoal and make illuminating gas.

Claim.—The combination of wood gas, the hydrogen of water, and the gas of paraffine oil, or the same combination with any other oil gas, or the gas obtained from bituminous coal, when effected in the manner substantially as described.

Also, the methods described for producing and uniting the same with a view to convenience, efficiency, and economy.

No. 35,611.—B. B. HOTCHKISS, of Sharon, Conn.—*Improvement in Concussion Fuse for Explosive Shells.*—Patent dated June 17, 1862.—In the base of a case or barrel within the projectile is a conical aperture into which fits a corresponding plug. Between this plug and its seat is introduced a wire, which is held in position sufficiently firm to resist any concussions incurred by ordinary handling. The inner end of this wire is secured to a heavy plunger filled with powder, and having on its upper end a cone provided with a percussion cap. When

the shell is fired from the cannon the conical plug is caused to leave its seat and thus release the wire and plunger, so that, as the projectile strikes a resisting object, the plunger is thrown forward and explodes the cap.

Claim.—The plug E and wire J, or their respective equivalents, arranged to operate in the percussive mechanism of explosive projectiles, substantially as set forth.

No. 35,612.—J. B. JOHNSON, of Lynn, Mass.—*Improvement in Warming Passenger Cars.*—Patent dated June 17, 1862.—This invention consists in arranging a stove or heating apparatus within the doorway of a carriage, and in such a manner as to be held in place by the door, and capable of being changed from one door to the other. An auxiliary pipe passes through that part of the roof projecting over the platform, to which pipe that of the stove connects for the purpose of preventing the soot from dropping within the carriage.

Claim.—The arrangement of a stove or heating apparatus within the doorway of a carriage, as described.

Also, the construction of the heating apparatus with the tongue and groove, or their mechanical equivalent, arranged on opposite sides or edges of it, and so as to enter the door frame and receive the door of the carriage, when such heating apparatus is arranged within the doorway of such carriage, as set forth.

Also, the arrangement of the auxiliary pipe I relatively to the driver's platform or in the projecting roof thereof, as explained, when the heating apparatus is arranged in the doorway, as set forth.

No. 35,613.—G. A. KEENE, of Newburyport, Mass.—*Improvement in Pendent Measuring Funnels.*—Patent dated June 17, 1862.—This invention consists in attaching a pendent tunnel measure to the faucet of a cock by means of a rubber or other flexible pipe, so that in whatever direction the cask may be tipped, the flat top of the measure will preserve its level so as to measure correctly by the graduated glass on the side, while at the same time all dust and insects are effectually excluded.

Claim.—Attaching a pendent tunnel measure to a cask faucet by means of a rubber or other flexible tube D, substantially as described and for the objects specified.

No. 35,614.—M. M. LATTA, of Goshen, Ind.—*Improvement in Surgical Splints.*—Patent dated June 17, 1862.—This invention relates to a splint designed chiefly for the treatment of fractures and other diseases of the long bones of the thigh and leg, and in certain cases of the arm also. Its nature will be understood by reference to the claim and engraving.

Claim.—First, applying the counter extension to the splint instead of to the person, substantially as set forth.

Second, applying the principal dressing to the sound limb, substantially as set forth.

Third, the use of a spring and index, or equivalent devices, substantially as described, to show the amount of extending force applied.

Fourth, attaching the cross bar D to the long splint A by springs B B, which permit the descent of the cross bar, retain the splint in correct position, and equalize the tension upon both ends of the bar so as to cause it to slide freely on the shaft F.

Fifth, supporting the cross bar D upon a truck frame, substantially as described. to adapt it to move without obstruction.

Sixth, the combination of the graduated crutch P, extension devices L N O, spring J, and index i, for the purpose of measuring the relative length of a healed and an uninjured limb, as explained.

Seventh, in combination with a foot board M, rigidly secured to the cross bar D, the application of the extension to the foot independently of the said foot board, substantially as and or the purposes described.

No. 35,615.—W. A. LIGHTHALL, of New York, N. Y.—*Improved Circulator for Steam Engines.*—Patent dated June 17, 1862.—This invention is designed to be applied to refrigerators for cooling the injection water of condensing engines to be re-used in the condenser for the purpose of accelerating the flow of cooling water through the tubes of the refrigerator or condenser when the vessel is propelled at too low a rate of speed to supply the proper amount of cooling water to the tubes to produce the required effect. It consists in connecting with the "outboard pipe" of the apparatus, a vane or propeller wheel driven by the shaft of the engine or other suitable means, and at a proper rate of speed to force out through the "outboard" pipe, and receive through the "inboard" or receiving pipe, a larger supply of the external or cooling water than would be forced out of or introduced into those pipes by the motion of the vessel through the water.

Claim.—The combination of the propeller or vane wheel F with the refrigerator or condenser A, supply pipe B, and delivery pipe C, arranged and operated as and for the purpose set forth.

No. 35,616.—G. MCKOWN, of Altona, Ill.—*Improvement in Machines for Upsetting Tires.*—Patent dated June 17, 1862.—This invention consists in the employment of an apparatus composed of a toggle which operates a slide, to which latter is fitted a jaw provided with

teeth. This slide is also provided with an oblique slot, in which is fitted a taper key. At the end of the bar upon which the slide works is attached a cross bar provided with a corresponding jaw, slot, and key, but placed in a reversed position, all so arranged as to permit the tires to be shrunk so as to fit the wheels to which they are to be applied without being cut and welded.

Claim.—First, the taper keys J M, when fitted in taper oblique slots I L, for the purpose of enabling them to sink into the tire under the action of the slide G, as described.

Second, the loop O and bar P, constructed and arranged as shown, for the purpose of forming a bearing or support for the heated portion of the tire, as specified.

Third, the combination of the toggle D with slide G attached, the stationary bar K, jaws H N, the oblique slots I L, keys J M, and the bearing or support formed of the loop O and bar P, all arranged for joint operation as and for the purposes set forth.

No. 35,617.—PURCHES MILES, of Hartford, Conn.—*Improvement in Sash Locks.*—Patent dated June 17, 1862.—This invention consists in the employment of a swinging or vibrating lever with a suitably formed projecting end in combination with a spring cam piece so arranged as to maintain a constant pressure of the moving lever against the surface on which the retaining force is to be exerted and prevent the lever from moving back. The vibrating lever is formed with an eccentric hub piece in combination with a retaining leg or projection on the spring cam for the purpose of holding the vibrating lever properly within the case. With the vibrating lever is also combined a double cam dog or eccentric roll.

Claim.—The swinging lever B in combination with the cam D, with its arm D′, and the spring *d*, or its equivalent, and the key E, the whole constructed and operating as described for the purpose set forth.

Also, forming on the pivot end of the arm B an eccentric hub *i* in combination with the arm D′ of the spring cam D, for retaining the vibrating arm within the case A, as described.

Also, the combination of an eccentric clamping dog or double cam piece C, or its equivalent, with the vibrating spring-actuated lever or arm B, substantially as and for the purpose set forth.

No. 35,618.—JOHN MIX, of West Cheshire, Conn.—*Improvement in Securing Bits in Braces.*—Patent dated June 17, 1862.—This invention consists in providing the cylindrical shank of the bit with two plain surfaces, against one of which a screw or stop in the socket is made to bear, and against the other a set screw, also passing through the socket, is forced, by which the bit is readily adjusted and firmly secured.

Claim.—The cylindrical shank D provided with plane surfaces *a c*, as shown, in connexion with the stop or bearing E and the set screw F, all arranged substantially as and for the purpose set forth.

No. 35,619.—CHARLES MORRILL, of New York, N. Y.—*Improvement in Breech-Loading Ordnance.*—Patent dated June 17, 1862.—This invention consists in combining a locking or breech-pin with a sliding box by means of a sliding joint, which is operated by means of a lever and eccentric. On the sides of the breech pin are inclined flanges which slide in grooves, to which they are fitted.

Claim.—First, the combination of the eccentric E, the sliding box C, and the breech-pin B, or their equivalents, operating substantially as and for the purposes described.

Second, the arrangement of the inclined flanges N N and the corresponding grooves O O, substantially as and for the purposes described.

No. 35,620.—A. P. MYERS, ISAAC SEARLES, and G. W. SPENCER, of Prattville, N. Y.—*Improvement in Churns.*—Patent dated June 17, 1862.—This churn is provided near its bottom with a horizontal partition, which forms a small compartment to receive a drawer, in which is placed a coiled pipe communicating at one end with the nozzle of a bellows which is attached to the churn. The lower compartment communicates with the churn above the surface of the cream by means of an external pipe. The plunger is formed of two cross bars, which latter are provided with holes, through which pass the rods of valves. On the under side of each dasher bar are openings or air cells which are filled with warm air as the dasher is raised. When the dasher is forced down, the warm air is carried through the cream until the valves are opened, when it again escapes and passes up through the cream.

Claim.—The combination of the air cells *i* and valves *j* with the dasher J and bottom *a*, as shown and described.

Also, the arrangement of the movable water receptacle C, air-pipe D, bellows E, and pipe I with each other and with the chamber B and churn A, in the manner shown and described.

No. 35,621.—S. R. PARKHURST, of New York, N. Y.—*Improvement in Machinery for Cleaning Wool, Cotton, &c.*—Patent dated June 17, 1862.—This invention consists in the combination of two toothed feed-rollers with a pair of bur cylinders and a beater, whereby the fibres are opened and the foreign substances removed by the beater; and with the said bur cylinders are also combined a third bur cylinder and a beater that operate on the opposite side of the fibre to that upon which the first set of bur cylinders are made to act, for the purpose of removing any foreign substances that might previously have been enveloped in the fibres. From the last bur cylinder the fibres are taken by "the licker in" of a carding machine or by a brush, doffer, or other convenient means.

Claim.—The arrangement of the cylinders *d* and *e*, feed rollers *b* and *c*, and beater *f*, substantially as and for the purposes specified.

Also, the cylinder *h* and beater *i* when combined with the cylinder *d* and beater *f*, whereby the cotton, wool, or other fibre is exposed on both sides of the bat to the operation of the beaters, as and for the purposes set forth.

No. 35,622.—CHAS. H. PLATT, of New York, N. Y.—*Improved Bush for the Sheaves of Tackle Blocks.*—Patent dated June 17, 1862.—This invention consists in making the greater portion of the bush which is fitted in the wooden sheave of square or polygonal form, for the purpose of preventing the turning of the bush within the sheave, instead of depending upon bolts passing through the latter, as is usual, to effect the same purpose. The bush is provided with a flanch, which is bolted to the sheave in order to prevent end motion out of the sheave.

Claim.—A metallic bush B for wooden sheaves A, formed of a square or polygonal part *a*, provided with a flanch *b* of circular or other form to admit of the bolts *c* passing through it, substantially as and for the purpose set forth.

No. 35,623.—L. W. POND, of Worcester, Mass.—*Improvement in Revolving Fire-arms.*—Patent dated June 17, 1862.—This invention relates to that class of revolvers which have their cylinder frames made to open at the lower front corner by a movement on a hinge-joint at the upper rear corner, for the purpose of introducing the cartridges into the chambers from the rear of the cylinder, and it consists in a downward continuation of the upper part of such frame to pass over the rear of the cylinder at the point where the hammer strikes the cartridge in such a manner as to form a recoil-shield which is wholly or nearly independent of the breech-piece or usual recoil-plate and of the lower part of the cylinder frame, thereby relieving the said plate and the hinge-joint of the strain of the recoil.

Claim.—The combination with a cylinder frame made in two pieces, hinged together at the upper rear angle, of a downward extension G of the upper part of the frame below the hinge joint, substantially as and for the purpose specified.

No. 35,624.—GEORGE PRATT, of West Roxbury, Mass.—*Improvement in Coal Sifters.*—Patent dated June 17, 1862.—This invention consists of a metal disk provided with a flange projecting on the under side so as to fit over a barrel, and with another flange on the upper side fitted with a socket on one side to receive a swivel that projects from the under side of a plate secured to the sieve. The opposite side of the disk is made to allow a cast-iron handle, secured to the sieve, to have a horizontal movement. The dust is prevented from escaping by stops rising in suitable places from the ring, and the open space in which the handle moves, is closed by a circular slide of the same diameter as the inside of the flange, the slide being fitted to and moving with the handle in a suitable channel on the ring.

Claim.—First, the arrangement of the swivel plate *f* projecting from the side of the sieve D, in combination with the disk or ring A and arm *c*, constructed and operating as and for the purpose specified.

Second, the arrangement of the ring A with flanges *a b* and open space *k* in combination with the handle E, circular slide *l*, stops *n*, sieve E, cover C, and barrel B, all constructed and operating as and for the purpose shown and described.

No. 35,625.—SAMUEL RICHARDSON, of Rochester, N. Y.—*Improvement in Corn Shellers.*—Patent dated June 17, 1862.—This invention consists in the employment in corn shellers, of an outer or secondary cylinder, which is composed of a series of annular divisions, in combination with the primary or inner cylinder to which each division is hung by means of guide pins and springs in such a manner as to yield and thereby adjust themselves to the passage through the machine of large or small ears and to any inequalities of size in the same ears.

Claim.—The employment, in corn shellers, of a series of annular sections or divisions B (which form the outer cylinder) in combination with the primary or inner cylinder D, they being arranged and operating substantially in the manner specified.

No. 35,626.—E. C. ROBERTS, of Salem, Mich.—*Improved Mode of Preserving Fruit and Vegetables.*—Patent dated June 17, 1862.—This invention consists in preserving fruits and vegetables in their fresh and natural state by keeping the same at a low temperature, nearly but not quite to the freezing point, by means of snow and ice.

Claim.—The preservation of fruit and vegetables by the combined action of snow and ice, when placed around the boxes containing the fruit or vegetables, as set forth.

No. 35,627.—H. C. ROGERS, of Scranton, Pa.—*Improvement in Hoes.*—Patent dated June 17, 1862.—The nature of this invention is explained by the claim.

Claim. A

Claim.—As a new article of manufacture, a hoe A composed of two plates *a b*, one of iron and the other of steel, so united by welding them together that the two metals form the cutting edge, for the purpose set forth.

No. 35,628.—TIMOTHY ROSE, of Cortlandville, N. Y.—*Improvement in Churns.*—Patent dated June 17, 1862.—The inner vertical bars of the dasher are made square, and are set in the cross pieces so as to present an angle to the cream when in motion. The outer bars are made larger, the front of each having an angular face, and the rear being either angular or convex for about one-third of its length from the upper end downwards; the remaining two-thirds of its length is concave for the purpose of forming a vacuum in its rear when in motion, and this concave portion of the outer bars is connected with the front by a blind passage way for air; the object being to produce the butter by pressure rather than by beating or pounding.

Claim.—The peculiar form and construction of the outer bars or slats of a vertical churn dash in combination with the middle bars, substantially as described, with the object and for the purpose set forth.

No. 35,629.—SIMON ROSENHEIMER, of New York, N. Y.—*Improvement in Boots and Shoes.*—Patent dated June 17, 1862.—This invention consists in securing to the inner side of the front part of the sole, a wedge-shaped ridge or partition, so as to separate the big toe from the others, for the purpose of curing the enlargement of the joint of the foot caused by bunions, corns, &c.

Claim.—The combination of the sole of a shoe or boot with a small ridge or partition, substantially in the manner and for the purpose as described.

No. 35,630.—WILLIAM RUMBOLD, of St. Louis, Mo.—*Improvement in Domes.*—Patent dated June 17, 1862.—The inventor says: "The principle of construction adopted in this invention consists in providing for the confining of the thrust upon arched ribs of domes, by the construction of the arched ribs in one unbroken length, and with inner and outer shoulder projections, and placing strong metal bands upon the *extrados* and *intrados* of the arched ribs, in such a manner that the skeleton dome constitutes a rigid structure possessing great strength in proportion to its weight, and while the bands confine the thrust of the arch beams or ribs, the latter in turn support the bands and prevent their moving either upward or downward and also the spreading or twisting of the ribs."

Claim.—A metal dome constructed substantially as described, for the purpose set forth.

No. 35,631.—A. F. SAUNDERS, of Chelsea, Mass.—*Improved Clothes Wringer.*—Patent dated June 17, 1862.—The standards which support the rolls are cut away at their upper end, and a block is hinged to the edge of the standard, thus forming a jaw. A projecting piece of this block bears on the shaft of the upper roll, the pressure upon which is regulated by means of a thumb screw passing through a brace and into a wooden spring, each end of which bears against one of the jaw pieces near its top.

Claim.—The described clothes-wringing machine, consisting essentially of the rolls B D, the standards A A′, with their movable jaws F, the spring H, and regulating screw G, arranged and operating substantially as described.

No. 35,632.—S. B. SEXTON, of Baltimore, Md.—*Improvement in Heaters.*—Patent dated June 17, 1862.—The nature and object of this invention will be understood from the claim and engraving.

Claim.—First, the air-heating chamber F located above the fire pot between the chambers G G′, communicating in front with the interior of the room and at the back with a chamber *l*, from which heated air is conducted to apartments above the said parts, being arranged to operate in the manner and for the purposes specified.

Second, the employment of the air-heating chamber F, located as set forth and open both at front and back, as a means of producing a free circulation of air in contact with the top of a covered fuel supply chamber, E, of any suitable construction.

Third, the combination of the chamber F, stoppered aperture N, flue D, and covered opening *e* of the fuel supply chamber, all arranged in the manner and for the purposes specified.

No. 35,633.—PIERPONT SEYMOUR, of East Bloomfield, N. Y.—*Improvement in Seeding Machines.*—Patent dated June 17, 1862.—Under the bottom of the seed box is secured a metallic plate or fixed jaw, to which all the other parts of the device are attached. Lengthwise through this jaw is an oblong aperture, and beneath the same is secured an adjustable jaw supported by a number of transverse bars attached to the side of the fixed jaw. Upon the upper side of these supporting bars are projections which fit in oblique slots in the adjustable jaw, so that by moving the latter longitudinally, the opening may always be readily adjusted.

Claim.—The arrangement and combination of the fixed, attaching jaw B, movable, adjusting jaw C, and adjustable supporting guide bars D D D, substantially in the manner and for the purpose specified.

No. 35,634.—JONATHAN SMITH, of Tiffin, Ohio.—*Improvement in Grain Drills.*—Patent dated June 17, 1862.—Between the bars forming the double drag bar is a metal block or plate provided with two or more holes for the passage of a bolt, to which the spring is secured for the purpose of adjusting the latter, so that the shovel or point of the drill tooth may be thrown forward or backward, and thus cause the seed to be deposited at a greater or less depth as desired. The upward curved projection of the tooth is also provided with holes to receive a wooden pin, which may be changed to suit the position of the spring as adjusted by the block.

Claim.—First, in combination with the spring *f* and curved neck S of the tooth *b*, or their equivalents, block H, placed between the bars, forming drag bar *a*, and provided with two or more holes for the purpose of adjusting the position of drill tooth or boot *b*, as and for the purpose set forth.

Second, in combination with a seed-drill boot, held in position or operated by a spring, providing said boot with suitable projections, and such projections with adjusting holes and pin to retain the boot in position when in use in case said spring should by any means be rendered inoperative, as and for the purposes set forth.

No. 35,635.—WILLIAM SOUTHWORTH, of Newcastle, Maine.—*For Multiplying Camera.*—Patent dated June 17, 1862.—This invention consists in so arranging the tube lenses as to enable them to be moved from one side of the camera to the other, and so that they can be raised or lowered in order to bring the picture upon different portions of the plate with the aid of a partitioned box for a diaphragm which moves with the lens. This diaphragm has a partition when more than one lens is used, and when placed in its socket moves with the lenses and the light cannot reach the plate upon which the picture is taken, except through the apertures intended for the size of the picture. The diaphragm can be partially drawn out or slid back at the will of the operator.

Claim.—First, the device for moving the lenses, as described, namely, the raising or lowering the lenses by means of the holder B and catches F.

Second, moving the lenses from one side of the camera C to the other, to stops *s s*, by means of the slide A.

Third, the manner of excluding the light from the sensitive plate by the use of the partitioned box or diaphragm D.

Fourth, the manner of constructing the same, so that it can be partially drawn out or slid back at pleasure.

No. 35,636.—J. H. THOMAS and P. P. MAST, of Springfield, Ohio.—*Improvement in Seed Drills.*—Patent dated June 17, 1862.—This invention relates to the construction of the housing bar on the horizontal plate which is secured to the under side of the seed box for the purpose of holding the different slides by which the delivery of seed is regulated, and it consists in making this bar which extends the whole length of the seed box in one piece, the same having been heretofore made in short sections which were secured separately to the bottom of the seed box. The loops or parts which hold the cut-off slide are also made in one piece with the housing bar.

Claim.—The plate B, provided with the projections *c* and loops *g*, the whole being cast in one piece, in the manner and for the purpose set forth.

No. 35,637.—W. B. TREADWELL, of Albany, N. Y.—*Improvement in Breech-loading Ordnance.*—Patent dated June 17, 1862.—The breech-pin of the gun is of semispherical form, and provided with a projectile from the centre of its circle. On the sides of the gun are cast projections extending back of the breech-pin. The breech-pin is secured in place by means of a wrought-iron bail of curved form, its outer circumference pressing tightly against the cap or breech-pin, and its ends passing through and supported by the projection above mentioned.

Claim.—The employment of the gun with concave breech in connexion with the convex breech-piece, the bail D, and the projecting pieces C C, the several parts being constructed and operating in the manner and for the purpose set forth.

No. 35,638.—C. D. VAN ALLEN, of Syracuse, N. Y.—*Improvement in Churns.*—Patent dated June 17, 1862.—In the centre of the churn between the dash rods are placed perforated movable partitions, and between these is a regulating slide having a handle that passes through the lid of the churn, so that when the slide is raised, the cream or milk will pass through the partitions. Upon the top of the churn is a butter tray provided with a slide for passing the water and buttermilk from the butter.

Claim.—The combination and arrangement of the floats B B, the partitions F F, the regulating slide C, and the butter tray H, when used for the purposes specified.

No. 35,639.—G. TRINK, of New York, N. Y., and L. HEITKAMP, of Brooklyn, N. Y.—*Machine for Cutting Books in the Round.*—Patent dated June 17, 1862.—This invention consists in combining in one machine a press suitable for holding a book and presenting the front edge of the same to be cut and finished, with a rocking knife or a knife turning on its axis, the cutting edge and polishing surface of which produces the finished concave of the

front of the book. The back of the knife is smoothly finished and polished, and the surface made to conform to the curved surface of the front of the book, so that as it follows the track of the knife edge, it is caused to smooth and polish the front edges of the leaves.

Claim.—First, a machine for cutting the fronts of books in the round, consisting of a rocking knife suitable for cutting the round or concave of the front edge of the book, in combination with a press suitable for holding the book and presenting it to the action of the knife, substantially as described.

Second, in combination with a press suitable for holding the book, a convex polishing device, substantially as described, for the purpose of polishing the fronts of books in the round, as set forth.

Third, in combination with a press suitable for holding a book and presenting the front edge to be cut, a knife edge moving in the desired curve of the round, having combined with it a polishing surface, substantially as described.

Fourth, in combination with a press suitable for holding and presenting the front edge of the book to be cut, the endwise motion of the knife and polishing device, whether combined together or separate from each other, as described, when constructed and arranged to move in the curve necessary to cut and finish the front of the book in the round, substantially as described.

Fifth, in combination with a press suitable for holding the book, a knife, the cutting edge of which travels in the desired curve of the round, substantially as described.

Sixth, in combination with a press suitable for holding a book and presenting it to be cut, and a knife having a cutting edge moving in the desired curve of the round, a cutting board, or other suitable surface, for the knife to cut against, substantially as described.

No. 35,640.—W. W. VIRDIN, of Baltimore, Md.—*Improved Rotary Engine.*—Patent dated June 17, 1862.—In this machine the drum, which is stationary, while the cylindrical casing enclosing it is rotary, is cast in two sections, each of which contains one half of the annular steam chest and one half of the steam passages. Each section is also cast with one fourth of the chambers D and one fourth of the pistons *c* and *m*, so that when they are bolted together the drum embraces one half of the said chambers and pistons. The annular steam chest lies near to and surrounds the eye of the machine, and the outer walls of the steam passages are as nearly tangential to the outer wall of the steam chest as is practicable. The drum and cylindrical case are placed the one within the other, and there confined by annular rings grooved on their inner surfaces to receive annular packing rings, which are pressed against the surfaces of the drum and case by means of springs. In the groove formed between one of the annular rings and the flange of the cylindrical case is secured, by means of bolts, the rim of the wheel whose hub passes through the eye of the machine.

Claim.—The chambers D, when formed partly in the cylindrical case and partly in the drum, and when operating in the manner substantially as described.

Also, the peculiar arrangement of the steam passages *a* with respect to the annular or ring steam chest C and butments or pistons *l* and *m*, substantially as specified.

Also, the grooved annular packing ring *f*, as and for the purpose set forth.

Also, the wheel J, when constructed and operating substantially as specified.

No. 35,641.—WILLIAM VOGT, of Louisville, Ky.—*Mode of Fastening Shirt Studs.*—Patent dated June 17, 1862.—This invention consists in making a shirt button in two parts, which are held together by a spring by which the button may be securely attached to the shirt.

Claim.—The application of the spring and lever to shirt buttons composed of two parts, thereby preventing them from getting lost and facilitating the fixing of them.

No. 35,642.—W. B. WADMAN, of Boston, Mass.—*Improvement in Coal Sifters.*—Patent dated June 17, 1862.—This invention consists in the arrangement of a rotary cylindrical sieve fitting over a square projection on the upper surface of a handle, which oscillates on a pivot projecting from its lower surface, in combination with a barrel or cylinder provided at its bottom with a flaring rim and bridge, forming the socket for the pivot of the handle in such a manner that coal and ashes thrown into the sieve may be conducted by the conical centre to the perforated portion of the bottom of the sieve, and by the combined action of the oscillating handle and flaring rim the coal may be readily sifted.

Claim.—The arrangement of the square projection *b* on one and the pivot *a* on the other side of the handle E, in combination with the square socket *c* in the centre of the sieve F, and with the bridge D in the bottom of the barrel A, as and for the purpose specified.

Also, the conical cap *d* over the socket in the centre of the sieve E, as and for the purpose described.

No. 35,643.—SYLVENUS WALKER, of Boston, Mass.—*Improved Clothes Wringer.*—Patent dated June 17, 1862.—This invention consists in an arrangement of parts as designated in the claim, and will be understood by reference to the engraving.

Claim.—The frame A constructed of two forked side pieces, and provided with curved flanches or guards *d d* and ears or lugs *g g*, in combination with the screws E E passing through the ears or lugs *f f* of the sockets or bearings D D of the upper roller C, through

the ears or lugs *g g* of the frame A, and through the springs F F underneath the ears or lugs *g g*, all arranged as and for the purpose specified.

No. 35,644.—JOB T. WILLIAMS, of Philadelphia, Pa.—*Improvement in Lamp Reflectors.*—Patent dated June 17, 1862.—This invention consists in the employment of a circular reflector composed of an outer concave rim and a central convex projection, and provided with radial ribs or corrugations.

Claim.—The reflector composed of the outer concave rim *a* and central convex projection *b*, and having radial ribs or corrugations, the whole being constructed and arranged as and for the purpose set forth.

No. 35,645.—JOHN E. WILSON, of Baltimore, Md.—*Improvement in Apparatus for Defecating Liquids.*—Patent dated June 17, 1862.—This apparatus is composed of three tanks or vessels arranged one upon the other, the two upper ones forming respectively the receiver and filter, and the lower one the reservoir, combined with which are suction and discharge pipes and a force pump, by means of which the liquid may be impelled through a suitable filtering medium in a continuous circuit without coming in contact with the external air at any time during the operation.

Claim.—The combination of the reservoir A, receiver B, and filter C, with the suction and discharge pipes *g h*, force pump and conducting faucet *j*, all arranged and operating in the manner explained, to defecate or cleanse hot or cold liquids, by forcing them in a continuous circuit without contact with the external air.

No. 35,646.—JOHN ZIMMERMAN, of Bloomfield, Pa.—*Improvement in Lifting Jacks.*—Patent dated June 17, 1862.—This invention consists in the employment of two dogs arranged on opposite sides of the standards, and which are operated by means of a connecting rod and a sliding rod, the latter extending along the working lever to the hand of the operator.

Claim.—The two racks *b* and *c* in combination with the two dogs *g* and *n*, when arranged one on each side of the standard A, and operating substantially as described.

Also, the combination of the two racks *b* and *c*, the two dogs *g* and *n*, the connecting rod F, and the operating rod D, as and for the purpose set forth.

No. 35,647.—A. I. AMBLER, of Milwaukie, Wis., assignor to Himself, R. N. AMBLER, and W. MARTIN, of the same place.—*Improvement in Railroad Car Brakes.*—Patent dated June 17, 1862.—This invention relates to a mechanism by means of which the brakes of a series of connected cars may be simultaneously operated from the locomotive, either by steam or by friction from one of the driving wheels thereof, each car at the same time being capable of being operated by a brakeman as usual.

Claim.—First, the employment or use of a steam cylinder applied to a locomotive and connected with a revolving shaft M, substantially as shown, when said steam cylinder is used in combination with revolving brake rods Q attached to the cars on the trucks thereof, for the purpose set forth.

Second, the employment of bent or angle levers with friction rollers to obtain perfect uniformity of pressure, in combination with rods and chains, to connect the braking bars and each other when operated by a tumbling or revolving rod, substantially as shown, and for the purpose set forth.

Third, actuating the brakes from the rotating rod Q through the medium of a crank V and spring *m*, arranged with a lever Z, or applied directly to the brakes so as to operate substantially as and for the purpose set forth.

Fourth, the jointed shaft H′, provided with the screw J′, sliding spring rod I′, lever K′, or its equivalent, and the worm wheel *i** on the chain shaft *j**, all arranged as shown, for the purpose specified.

No. 35,648.—E. G. DYER, of Hamilton, Ohio, assignor to OWENS, LANE, DYER & Co., of the same place.—*Improvement in Threshing Machines.*—Patent dated June 17, 1862.—This invention relates to an auxiliary cleaning device to be attached to a common threshing and cleaning machine, and it consists in the employment of a suction wind tube or spout of a form approximating an inverted U, the receiving limb of which is open at the bottom, and the discharging limb opens into a draught chamber, from which the fan chamber draws its supply of wind.

Claim.—The application to the grain delivery of a threshing machine of the winnowing suction spout E, in combination with the shoe fan, the whole being constructed, adapted, and regulated substantially as set forth.

No. 35,649.—MERWIN FOWLER, of Meriden, Conn., assignor to EDWARD MILLER, of the same place.—*Improved Spring Catch for Lamp Chimneys.*—Patent dated June 17, 1862.—This invention consists in securing the chimney to the lamp top by means of a hook which is attached to the lamp top, and is provided with a spring so arranged as to cause the hook to press upon the flanch of the chimney, and thus firmly secure the latter to the cone of the burner.

Claim.—The combination of the hook C and spring *d* applied to the lamp top or burner,

Claim.—First, the wheel H constructed with an upright rim having slots substantially

Claim.—The combination of the hook C and spring *d* applied to the lamp top or burner, substantially as and for the purpose set forth.

No. 35,650.—CHARLES HEATH, of Malden, and JOSEPH WILSON, of Boston, administrators of J. B. WILSON, deceased, late of Malden, Mass.—*Improvement in Machinery for Pressing Brick.*—Patent dated June 17, 1862.—This invention consists in the combination of a short lever with sectoral toggles or eccentrics and two connecting rods extending from such lever to a cross head or bar for the purpose of operating the follower of a brick press which is forced against the brick so as to crowd it into the mould and firmly condense it therein.

Claim.—The combination of the cranked lever or shaft K and the two connecting rods I I with the two sectoral toggles L M and the cross-bar G, the whole being applied so as to operate with the follower and the discharger of a brick press, substantially as specified.

Also, the combination of the spring H with the bar G, the rods I I, the cranked shaft K, and the sectoral toggles L M, when employed for operating the follower or platen of a brick press, as specified.

No. 35,651.—E. C. HUSSEY, of Brooklyn, N. Y., assignor to Himself and JOHN DEVLIN, of the same place.—*Improvement in Machines for Making Elongated Bullets.*—Patent dated June 17, 1862.—This invention consists of a machine in which cylindrical blanks are cut from rods of lead, then brought to the desired external form for the bullets by a rolling process, and afterwards drilled to produce the cavities in their bases.

Claim.—First, the combination of a straight groove *e* in a stationary flat table or bed, and a corresponding groove in a straight reciprocating bar or slide, such groove having a suitable form and operating to roll the blanks of lead into shape by a movement about their own axes, substantially as specified.

Second, the combination with the grooved reciprocating bar or slide C and the grooved stationery table or bed A of a cutter *c*, applied and operating, in connexion with the grooves of the bar and slide and table or bed, substantially as set forth.

Third, the combination with a bar or slide C a table or bed A and cutter *c*, operating as described, of a feed bar E and an elastic feed lever D, applied and operating substantially as and for the purpose specified.

Fourth, the combination with the grooved table or bed A and the grooved bar or slide C of one or more pairs of holding dies, and a corresponding number of drills applied to receive the rolled bullets from the said grooves and drill the cavities in their bases, substantially as specified.

Fifth, the dies F G, constructed, combined, applied, and operated substantially as and for the purpose specified.

Sixth, combining the die carriages H H with the reciprocating feed bar E by means of grooves *q q* and switches J J, substantially as and for the purpose set forth.

No. 35,652.—I. S. and J. W. HYATT, jr., of Chicago, Ill., assignors to said I. S. HYATT and OLIVER BASCOM, of Whitehall, N. Y.—*Improvement in Knife and Scissors Sharpeners.*—Patent dated June 17, 1862.—This invention is designed as an improvement upon the device patented to the said I. S. and J. W. Hyatt, jr., February 19, 1861, and it consists in the use of a stationary rest for guiding and sustaining the blades of shears and scissors at the proper angle, in connexion with a grinding wheel for sharpening the same, the said rest being formed double so as to enable both common shears and sheep shears, which are ground at opposite angles, to be sharpened on the same machine. Combined with the scissors rest, either double or single, are twin grinding wheels which are kept together by a spring, and so arranged as to admit of the sharpening of both knives and scissors by the same machine.

Claim.—First, the combination and arrangement of the double rest *d d'* and grinding wheel C, substantially as and for the purpose specified.

Second, the combination of the scissors rest D, either double or single, with the twin grinding wheels C C' kept in contact by a spring, or its equivalent, the whole forming a machine for sharpening both scissors and knives, substantially as described.

No. 35,653.—J. H. MEARS, of Oshkosh, Wis., assignor to Himself and ALFRED WARD, of the same place.—*Improvement in Rakes for Harvesters.*—Patent dated June 17, 1862.—This invention consists in hinging the rake to a ring or short sleeve used in connexion with a pinion and two bevel wheels, the pinion gearing into and between both wheels, and consequently turning them in contrary directions. The lower wheel turns on an upright spindle, and has a sleeve surrounding the said spindle and extending up through the upper bevel wheel, the ring hinged to the head of the rake, and also through certain saucer-shaped rims or caps, the latter having slots cut in and across their edges, or a part cut away. The upper bevel wheel has an upright rim attached to its outer and upper surface with one or more slots. The parts are so arranged that the rake will, in an elevated state, move towards, and, if necessary, strike down in a slanting direction under the bar of the reel, and sweep the grain from the platform, keeping in close contact therewith while so doing, after which it is raised to its original working point in an elevated position.

Claim.—First, the wheel H constructed with an upright rim having slots, substantially as and for the purposes set forth, in combination with wheels C *c*, sleeve D, spindle V, caps B and R, posts or springs U and W, and rake N, all constructed and arranged substantially as set forth.

Second, the caps B and R, or their mechanical equivalent, attached to the sleeve D of bevel wheel C, turning in a contrary direction from wheel H, constructed and operating in combination with rake N, substantially as and for the purposes set forth.

Third, the mechanical arrangement of rake N, with its ring or short sleeve L, with gear wheels H and C, and their attachments, whereby one wheel causes the rake to move toward the reel in an elevated state, and the other in a contrary direction, causing it to sweep in close contact with the platform, substantially as set forth.

No. 35,654.—J. E. SEAVEY, of Kennebunkport, Me., assignor to Himself and MATTHEW E. BOCHNER, of the same place.—*Improved Sail Link to Mast Hoop.*—Patent dated June 17, 1862.—This invention consists in the employment of a shackle which is connected to the head of a screw bolt by a hinge, the said bolt screwing into a crescent-shaped clasp which extends across the inner surface of the hoop.

Claim.—The mast hoop and sail connexion, consisting of the shackle, the bolt, and the clasp, constructed, arranged, and combined together, substantially in manner and so as to operate as specified.

No. 35,655.—CHARLES C. STANSELL, of Middleboro', Mass., assignor to Himself and A. W. ROCKWOOD, of Newton, Mass.—*Improvement in Lamps.*—Patent dated June 17, 1862.—This invention consists in combining with the wick-tube and the flame-adjuster of a lamp, a vapor intercepter and conduit whereby the vapor generated by the heat of that part of the wick-tube which extends within the oil reservoir may be intercepted and conducted to the flame to be burnt thereby. Combined with the above is also a heat-insulator by means of which the heat of the flame-adjuster may be insulated more or less from the vapor interceptor. The insulator consists of a hollow vessel made of glass of a bulging or conical form, and provided with two open necks, so that it may be fitted to the vapor-intercepter and the flame-adjuster.

Claim.—Combining and arranging with the wick the wick-tube B and the flame-adjuster H of a lamp, in manner substantially as described, a vapor intercepter F and conduit or passage G, the same being substantially as and for the purpose above explained.

Also, combining and arranging with the flame-adjuster and the vapor-interceptor and conduit, as described, a heat-insulator or insulating vapor-reservoir, made of a material and so as to operate in manner and for the purpose substantially as specified.

No. 35,656.—J. C. TOBIAS, of Middleport, Ill., assignor to Himself and HENRY C. KIRK, of White County, Ind.—*Improvement in Harness Saddles.*—Patent dated June 17, 1862.—This invention consists of a saddle or pad tree made in two parts, each part composed of two plates secured to each other by the screws of the terrets, and having between them a pad, the covers of which lap over the edges of the lower plate. The two parts are connected to each other by means of a curved link, the ends of which are secured in slots in each upper saddle plate, which connexion admits of a yielding to the movements of the animal in travelling, and readily conforms to his shape.

Claim.—As an improved article of manufacture, a harness saddle or pad tree, composed of plates A B, pad C, and cover *f*, made and united in the manner shown and described.

No. 35,657.—JOHN H. VICKERS, of Worcester, Mass., assignor to LUCIUS W. POND, of the same place.—*Improvement in Revolving Fire-arms.*—Patent dated June 17, 1862.—This invention consists of a revolving fire-arm formed of a continuous frame rigidly attached to the barrel enclosing the cylinder lengthwise, and pivoted to the stock in such a manner as to enable the rear part to fold into the breech piece, and to form a recoil plate independent of the breech-piece for relieving the breech-piece of the strain of the recoil, the said frame allowing the cylinder and breech-piece to be separated for the introduction of the cartridges into the chambers at the rear thereof. In combination with the continuous frame, the cylinder axis is so applied as to pass through the frame and cylinder from front to rear, and enter a hole in the breech-piece in such a manner as to secure the said frame in proper connexion with the breech-piece.

Claim.—The continuous cylinder frame A, rigidly attached to the barrel, and combined with the breech-piece D, to fold into a groove provided therein for its reception, substantially as and for the purpose specified.

Also, bringing the lower front angle of said continuous frame A to a portion *c* of the stock frame which projects forward from the bottom of the breech-piece D, substantially as specified.

And also, the insertion of the cylinder axis pin, in a forward direction, through the cylinder frame and cylinder, and into a hole into the centre of the breech-piece, substantially as and for the purpose specified.

No. 35,658.—S. R. GOING, of Brooklyn, N. Y., assignor to D. S. QUIMBY and D. S. QUIMBY, jr., of the same place.—*Improvement in Stoves.*—Patent dated June 17, 1862.—This invention consists in applying to the under side or bottom flue of the oven, a graduated slide damper provided with several holes, the largest ones being in front and gradually decreasing in size to the rear end of the oven, for the purpose of producing an equal amount of heat in and around the oven.

Claim.—First, the manner of equalizing the heat of the fire in and around the oven by means of a damper, as set forth.

Second, placing the damper B in the flue in the position shown.

Claim.—Asphaltum for the purpose of filling shells, substantially as set forth and described.

No. 35,659.—ALFRED BERNEY, of Jersey City, N. J.—*Improved Composition for Filling Shrapnell and other similar Projectiles.*—Patent dated June 17, 1862.—This invention consists in using the residue from the distillation of coal tar, generally known as asphaltum, instead of sulphur, for filling shells.

No. 35,660.—H. F. ADAMS and WILLIAM BERRY, of Syracuse, N. Y.—*Improvement in Kerosene Lamp Burners.*—Patent dated June 24, 1862.—This lamp is designed for burning kerosene oil without a chimney; and the invention consists of a wick-tube surrounded by a conically shaped cover, so as to form an air chamber, secured to the screw top of the lamp by radial arms for the purpose of admitting the free passage of air. Around the bottom of this cover is a concave flange, which serves to gather the air. Near the top of the wick-tube is secured a small concave flange provided with small openings on each side through which the air passes directly to the flame. A smaller cap is placed over the upper part of the wick-tube.

Claim.—The combination of the large concave flange F and conical air chamber A, having bottom openings as described, with the small concave flange R enclosed within the cap C, and said flange R being constructed with peculiarly formed centre and outside openings, as specified, and the whole being combined and arranged specifically as described and for the purposes set forth.

No. 35,661.—JOHN ALLEN and EDWARD PICK, of Brooklyn, N. Y.—*Improvement in Ovens.*—Patent dated June 24, 1862.—This invention relates to improvements in the class of ovens known as "reel ovens," and it consists in the use of a draught and steam flue opening from the mouth of the oven instead of a draught opening in the top of the baking chamber, as is usual in this class of ovens. With the baking chamber are combined two outlets or draught flues opening from opposite sides of the oven at an elevation above the floor and below the mouth of the oven, the said flues being connected with the chimney by flues passing upwards through the exterior walls of the oven. Between the fire-box and the baking chamber is arranged a double series of horizontal flues for the purpose of more thoroughly heating the lower part of the oven.

Claim.—First, the draught and steam flue opening from the mouth of the oven when combined with a baking chamber suitable for and containing the reel apparatus and bake pans, substantially as described.

Second, the side draught flues in combination with the baking chamber of a reel oven, when opening below the mouth of the oven and above the floor, substantially as described.

Third, the double series of horizontal heating flues in combination with the furnace and floor of a reel oven, constructed and arranged substantially as described.

No. 35,662.—GEORGE ARCHER, of Massillon, Ohio.—*Improvement in Combined Hounds and Fifth Wheel.*—Patent dated June 24, 1862.—In this device the hounds and lower section of the fifth wheel are made of iron in one piece. The hounds are separated at the forward end for the admission of the tongue. The upper section of the fifth wheel is bolted to the bolster and to the reach. Upon the forward and inner end of the lower section is secured an iron clamp, which hooks over the inner edge of the upper section so as to keep the two sections in contact

Claim.—The described special construction and arrangement of the hounds and fifth wheel, when combined and operating conjointly as specified.

No. 35,663.—S. A. BAILEY, of New London, Conn.—*Improved Rollers for Wringing Machines.*—Patent dated June 24, 1862.—Over a square wrought-iron shaft is placed a wooden cylinder of a larger internal diameter than that of the shaft, which cylinder is provided with a series of longitudinal slots or openings, thus forming a series of yielding slats when pressure is applied. These openings and the space between the cylinder and the shaft are filled with India-rubber: the outside of the cylinder is also covered with India-rubber; and the whole being subjected to heat, becomes united and forms a solid mass, the object being to form an elastic rubber cylinder which will not turn or become displaced upon the shaft.

Claim.—First, the employment of the wooden or metal cylinder B, constructed in the manner and used for the purpose specified.

Second, the use of the rubber packing between the slats of the cylinder and the shaft A for the purpose of supporting said slats, as is fully set forth.

Third, connecting the external rubber with the rubber between the slats and the shaft through the interstices or openings in the cylinder, substantially as and for the purpose specified.

No. 35,664.—JAMES R. BAKER, of Kendallville, Ind.—*Improved Mode of Removing Chimneys and Filling Lamps.*—Patent dated June 24, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—The attaching of the annular plate D, which has the cone or deflector E and draught chimney secured to it, to a sliding tube C fitted in the burner A, and provided with a hole or opening *b*, substantially as shown, to serve the double purpose of a guide and filling tube, and admit, by the raising of the tube, of the wick being lighted and the lamp filled without detaching the chimney from the burner or the burner from the lamp, as set forth

No. 35,665.—WILLIAM BALLARD, of New York, N. Y.—*Improved Metallic Defensive Armor for Ships.*—Patent dated June 24, 1862.—The framing of the vessel is composed of heavy wrought bar or plate iron and interposed frames of timber of the form required for the transverse section of the vessel. The armor is composed of several layers of plates, three of which are of flat bars of iron of different thicknesses, and the fourth or outer one of plates of a large size. In the second and third layers the bars are applied diagonally so as to cross each other.

Claim.—The combination of iron frames A A, interposed wooden frames B B, longitudinal covering bars or plates C C, reversed diagonal bars or plates D D and E E, and covering plates F F, substantially as and for the purpose specified.

No. 35,666.—JAMES BECK, of New York, N. Y.—*Improvement in Pliers for Closing Skirt Clasps.*—Patent dated June 24, 1862.—This invention consists in fitting the jaws of a pair of pliers with a flat male die and a concave rounded female die, so that in closing a metallic skirt clasp upon the hoop, the lips of the clasp are brought tightly upon the hoop. The dies are arranged in an oblique position relatively to the length of the pliers for the purpose of enabling both the hoops and tapes to pass the jaws in the operation of closing the clasp.

Claim.—First, the combination in the pliers of the flat male die *a* and the concave rounded female die *b*, substantially as specified.

Second, the arrangement of the dies obliquely to the length of the pliers, substantially as and for the purpose set forth.

No. 35,667.—SOLOMON E. BLAKE, of Worcester, Mass.—*Improvement in Folding and Tucking Gauges for Sewing Machines.*—Patent dated June 24, 1862.—This invention consists in so constructing and combining the parts, constituting a gauge for folding linen, cotton and other material to be sewed into tucks, folds, or plaits, as that, while capable of adjustment to admit of the production of folds or tucks of various widths and at various distances apart, it shall afford the necessary facility for unfailingly guiding the material while being sewed, and at the same time permit the parts being brought into operative condition in relation to each other without too great friction or strain upon the cloth, thereby rendering the work not liable to be disarranged before being brought under and across the path of the needle.

Claim.—The apparatus described as an attachment to a sewing machine for automatically folding or plaiting the material to be sewed, the same consisting of the following elements combined:

First, an adjustable gauge for the determination of the distances from fold to fold, and by which the material to be folded and sewed is guided to the sewing mechanism as described.

Second, two folding blades, either or both of which are movable within planes parallel, so as to allow of their adjustment in relation to each other and in relation to the gauge, as described

Third, rollers so hung on spindles fixed to or in folding blades as that the edge of said folding blades shall impinge upon the said rollers, substantially as described.

No. 35,668.—A B. CASS, of Muscatine, Iowa.—*Improvement in Cultivators.*—Patent dated June 24, 1862.—This machine is composed of a rectangular frame mounted on wheels and provided with share standards fitted upon pivots, and connected at their upper ends by a cross-bar, to the centre of which is attached a jointed lever. At the rear end of this lever is pivoted another lever fitted within a curved guide attached to the rear of the frame. This latter lever passes up through the driver's seat, so that the driver can operate it by pressing his back against it, which causes the shares to be raised above the surface of the ground and renders the implement inoperative. By having the lever jointed the shares may be made to conform to the irregularities of the rows.

Claim.—The pivoted share standards *a* a** and sliding share standards *g g*, connected to the jointed adjustable lever E, in combination with the seat H and lever F, connected to a lever E′ and the seat support I, all arranged as and for the purpose specified.

No. 35,669.—N. B. CLABAUGH, of Frederick City, Md.—*Improved Washing Machine.*—Patent dated June 24, 1862.—This invention consists in the employment of a cylinder, the

ends of which, at their peripheries, are cut in the form of arcs of circles, which are eccentric to the axis of the cylinder, and upon which are secured rubbing boards having corrugated faces. In the sides of the tub and passing under the cylindrical rubber, is arranged a curved weighted rubber-board composed of a series of rubbing plates, each of which plates is formed of a series of ribs increasing in height from one to the other downwards.

Claim.—First, a rubbing cylinder B armed with eccentric rubbers C, in the manner and for the purpose set forth.

Second, a rubbing board H, having its rubbing plates H′ formed with a series of ribs *h*1, *h*2, *h*3, and *h*4, of increasing height, in the manner and for the purpose specified.

Third, a rubbing cylinder B in combination with a rubbing board H, substantially in the manner and for the purpose set forth.

No. 35,670.—J. D. COCHRANE, of Milford, N. H.—*Improved Clothes Wringer.*—Patent dated June 24, 1862.—In the upper ends of the standards are secured the journals of the lower roller, to one of which journals the crank is attached. Above this roller is a second roller, the journals of which turn in the upper ends of spring arms attached to the standards. The pressure of the upper roller is adjusted by means of spiral springs upon pins attached to the standards and operated by means of thumb-nuts.

Claim.—An improved clothes wringer, the various parts of which are constructed, combined, and arranged to operate in relation to each other substantially as shown and described.

No. 35,671.—E. M. CORBETT, of New York, N. Y.—*For Camera Stand.*—Patent dated June 24, 1862.—This invention consists in the arrangement of two diagonal frames connected together so as to operate similarly to the "lazy tongs," and hinged at their opposite ends to the rising and falling platform which supports the camera, and to the stationary top of the stand, in combination with slides, which permit the said diagonal frames to adjust themselves according to their higher or lower position in such a manner that the platform with the camera can be raised or lowered in parallel planes, and the same firmly supported in front and rear in whatever position it may be brought. In connexion with the above is a wedge-shaped hinged slide moving in grooves in the sides of the platform for the purpose of adjusting the inclination of the camera.

Claim.—First, the arrangement of the diagonal frames E E′, connected together by pivots *a* on the principal of lazy tongs, in combination with slides *f g* and with the movable platform B and stationary top C, the latter being supported by three legs D, substantially in the manner and for the purpose shown and described.

Second, the employment of the wedge-shaped hinge slide H, guided by grooves O in the side flanges *n* of the platform B, as and for the purpose specified.

No. 35,672.—HERBERT CURTIS and ALFRED TUFTS, of Charlestown, Mass.—*Improvement in Sweat-leather Ventilators for Hats.*—Patent dated June 24, 1862.—The lower part of the sweat-band is made to encompass a thin flexible band or annulus made of spring steel, to the outer surface of which the lower ends of the inner legs of thin steel springs are attached. These springs are arranged within the air space between the body of the hat and the sweat-band, and have their lower ends fastened to the hat-body. When the hat-body is thin and flexible, a secondary hoop or annulus of a larger diameter than the other is employed, and made to fit closely into the open end of the hat-body, to which the lower parts of the outer legs of the several springs are to be fastened.

Claim.—The combination and arrangement, substantially as described, of a flexile annulus, or thin metallic hoop *a*, and a series of springs D with the sweat-band B and an air-ventilating space C, the whole being for the purpose or purposes specified.

Also, the combination of the secondary or holding hoop or annulus *b* with the series of springs D, the flexile annulus *a*, and the sweat-band B, to be applied within a hat-body, and with a ventilating or air space C between such body and band, substantially as specified.

No. 35,673.—R. D. DODGE, of Adel, Iowa.—*Improvement in Cultivators.*—Patent dated June 24, 1862.—The object of this invention is to connect the ploughs of a cultivator to each other and to the main frame, so that each plough can accommodate itself to the inequalities of the ground independently of the others, and that a side motion can be imparted to the ploughs, or to a portion of them, so that in the process of cultivation, both sides of the hill can be reached as close to the plants as may be desired.

Claim.—The arrangement of the stirrups *b*, connecting the front ends of the beams G G′, in combination with the treadles *e*, hand-levers *k*, and guide-bars *m*, all constructed and operating in the manner and for the purpose shown and described.

No. 35,674.—W. H. DOANE, of Cincinnati, Ohio.—*Improved Barrel-head Circling and Bevelling Machine.*—Patent dated June 24, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—First, so arranging the feed or driving shaft and the pulleys thereon, relatively to the saw arbor frame, that the movement of the saw arbor frame will cause the belt to change from the fast to the loose pulley, and *vice versa*, and thus cause the saw to be put in operation by its movement to the work, and out of operation by the opposite movement of said frame, substantially as described.

Second, the manner of making the disk or clamp self-yielding on different parts of its clamping surface, by means of yielding pins or projections, so that it will adapt itself to pieces of heading of uneven thickness, and hold them firmly while being cut, substantially as described.

Third, the angular connexion sliding-bar and slotted slide with prongs, operated with or without the foot lever, for drawing the prongs back out of the way, so that the heading may revolve when clamped and the feed started, and for producing a last motion, substantially as set forth.

Fourth, making the lower half the box or bearing *l l′ l″* which supports the worm shaft on the inside of the structure A hollow, so that it may be filled with oil for the worm to run in, and arranged inside of the hollow pedestal, thus preventing friction and wear, and insuring lubrication, substantially as set forth.

Fifth, arranging the heading-supporting prongs as described, and also the gearing and shafting within the conical structure, entirely out of the way, and substantially as described.

Sixth, the combination of the inner bevelling tools *j* of a heading machine with the flattened wedge screw bolts *j′* and their nuts, substantially in the manner and for the purpose described.

No. 35,675.—EDWIN S. GAYLORD, of Hartford, Conn.—*Improvement in Mica Chimneys for Lamps.*—Patent dated June 24, 1862.—This invention consists in the use of mica as a material for lamp chimneys, provided with compression rings at the upper and lower ends and a lateral joint bar, made single or in the form of a double-S clasp, to hold together the edges of the mica.

Claim.—As a new and improved article of manufacture, a mica chimney for lamps, &c. The combination of mica *a* from compression rings *c* and a lateral joint bar *b* or double-S clasp *b*, substantially in the manner as and for the purpose described.

No. 35,676.—DAVIS and JOSIAH GRAY, of Wayland, N. Y.—*Improvement in Axle Skeins.*—Patent dated June 24, 1862.—This invention consists in making the skein of a cast-steel plate with the inner end bevelled off to form a projecting tongue on the under side, and sufficiently thin to yield readily to compression, and then confining it to the axle by the same clips which attach the arms or reach to the axle.

Claim.—The combination of a hollow steel axle skein, constructed substantially as described, with the arm or reach clip, so constructed and arranged on the axle as to grasp and compress the sides of the skein, and thus hold it firmly to the axle.

No. 35,677.—JAMES GREAVES, of Utica, N. Y.—*Improvement in Pumps.*—Patent dated June 24, 1862.—In this pump the barrel and valve seat are made in one piece, of stoneware or other material, and secured to an iron flange, it being designed to prevent the water from freezing. The claim sets forth a series of devices composing the various parts of the pump.

Claim.—First, making the barrel A with the exterior enlargement B and valve seat L in one piece; the washer D, as used in combination with the enlargement B and flange C; the float-valve 2, water-chamber R, and small pipe S, as constructed and combined with barrel A and pipe 3; the lead lining 4, or equivalent; fastening the flange F to the wood pipe E; the combination of the flange G with the pump H; the iron bottom O O, as made and combined with the wood H; the ornamental cap I, as constructed and covered with the metal P; the ventilator No. 2, as constructed and combined with the pump H; the plunger No. 3, as constructed; the feet of the cross-piece 1, projecting in opposite directions in line with the valve seat outer edge, and riveting it to said seat; the washer 5, as fastened with screws 6 6 to the seat 2.

Second, the rubber strips 2 2 2 2 No. 4, or equivalent, as combined with the shaft 1 and dump 3; joint 6, as constructed and combined with strip O and projection 7; the guide 8 and its lining of leather, or equivalent, all as and for the purpose described.

No. 35,678.—JOSEPH HARRISON, jr., of Philadelphia, Pa.—*Improved Device for Removing Incrustations from Steam-boilers.*—Patent dated June 24, 1862.—In preparing the boiler for cleaning, the bolt used in holding the units together, as described in the patent for steam-boilers, granted to the said Harrison on October 4, 1859, is taken out at the required point, and into the neck of the units is introduced a metallic tube. At a short distance from the end of this tube is cut a tranverse slot, in which is placed an iron bar *a* about an inch in thickness and as wide as the outside diameter of the tube, and which moves upon a pin at its centre, motion being communicated by means of a bar B and connecting links *c*. The ends of the metal bar are provided with cutters *e*, which, as the bar is turned, serve to scrape off the deposit from the interior of the units.

Claim.—The combination of the tube A with the rod B and the bar *a* and the cutters *e* and *e*, whereby the cutters, which are to operate inside of a steam chamber, may be introduced through an opening of a smaller diameter than that of the chamber itself.

No. 35,679.—M. HARTER, of Independence, Iowa.—*Improvement in Evaporating Saccharine Juices.*—Patent dated June 24, 1862.—This invention consists in the arrangement of a secondary fire-door under the finishing pan, which is placed lower than the first or condensing pan, and communicates with the same through a grate in combination with one common flue, and with a damper between the two doors in such a manner that by said secondary fire-door and by the aid of the damper, the heat under the finishing pan can be regulated at pleasure without interrupting the action of the main fire on the first pan. The finishing pan is provided with a rotary agitator, consisting of a series of floats attached to arms extending from a rotary shaft, for the purpose of preventing the burning or overheating of the juice. Over the first pan is placed a convex cover, which serves to collect and carry off the condensed steam, and also aids in facilitating the evaporation.

Claim.—First, the arrangement of the secondary fire-door F in the side of the flue C in combination with the damper G placed between the door F and the main fire door D, and with the pans A B, all constructed and operating in the manner and for the purpose described.

Second, the employment or use of the rotary agitator H in combination with the evaporating pan B, as specified.

Third, the arrangement of the convex cover I in combination with the pan A, as and for the purpose set forth.

No. 35,680.—B. and E. HAWORTH, of Ridge Farm, Ill.—*Improvement in Sugar Cane Strippers.*—Patent dated June 24, 1862.—This invention consists in the employment of a series of cutters or strippers arranged and fitted in a frame in such a manner as to be capable of adjusting themselves to cane of different thicknesses, and also to suit the varying thicknesses or taper of each individual stick or cane as the latter is drawn through or between them and the leaves stripped therefrom.

Claim.—First, the employment or use of cutters or strippers, formed of plates *c c'*, the latter being allowed to yield or give under pressure, and both fitted in a suitable frame A, one over the other, and curved at one end in semi-elliptical form, substantially as shown, to operate as and for the purpose set forth.

Second, in combination with the strippers B C, the supplemental or auxiliary strippers E, applied to the frame A, and arranged, substantially as shown, to operate, in connexion with the strippers B C, as set forth.

Third, the manner as shown of securing in the frame A the plates *c c'* of the strippers B C, and likewise the manner of attaching to said frame the supplemental or auxiliary stripper E, to wit, by having the plates *c c'* fitted in taper recesses *b* in the frame, so that the plates *c* may be fixed, and the plates *c'* allowed to yield or give under pressure, and the strippers E formed at the inner ends of the plates D, which cover the recesses *b*, whereby the strippers may be very readily applied to the frame A, and detached therefrom when necessary for the purpose of repairs, the substitution of new ones, &c., &c.

No. 35,681.—V. W. HOUCK, of Buffalo, N. Y.—*Improvement in Stave-dressing Machines.*—Patent dated June 24, 1862.—The upper guide-feed roller E is made in two equal parts, so placed upon the shaft as to leave a narrow space between them, in which space is placed a guide stop S, so constructed as to be capable of being turned on the shaft and fixed to the same, when desired, by set screws. This stop is made yielding by means of a coiled spring, so as to adapt the machine to jointing staves of greater length than the circumference of the guide-feed rollers.

Upon the feed table is arranged a side guide piece U having a curvature corresponding to that of the edge of the stave when "listed," and connected to the side of the feed roller is a cam W, which, as the feed roller revolves and draws the stave in, will strike an arm v^2, and draw the guide away so as to allow the centre of the listed stave to pass the point of the guide piece. Upon the end of a shaft having a central support in the main frame is a cam of peculiar shape, with which is combined a horizontal bar, a vibrating rod, and a friction wheel, against which latter the cam revolves, and thus transmits its motion to the gate, and thence to the cutters, so that at each revolution of the cam two up and two down motions will be given to the gate and cutters, the object of the combination being to carry the cutters so quickly across the transition point as to joint the bilge of the stave on a true curve. Supported upon cross-bars between the third and fourth pairs of feed rollers is a curved bed plate, its longitudinal curve being that of the bilge of the barrel. It is fluted exactly in line with the lower feed rollers, so that the stave will pass in a direct line, and be held to the action of the jointers without any side slip.

Claim.—First, the adjustable and yielding guide stop S, in combination with the guide-feed rollers E E', for the purposes and substantially as described.

Second, the yielding guide piece U, in combination with the cam W, for the purposes and substantially as set forth.

Third, the cam P, in combination with the bar P^1, arm P^2, friction wheel p^4, and vibrating rod p^3, and rack shaft O, for the purposes and substantially as set forth.

Fourth, the curved bed plate K having flutes exactly corresponding to, and placed in line with, those of the lower feed rollers, for the purposes and substantially as described.

No. 35,682.—CHARLES HOWARD, of Morris, N. Y.—*Improved Washing Machine.*—Patent dated June 24, 1862.—Within a semi-cylindrical trough or box are placed two disks having corrugated faces, and secured each to a separate shaft. In standards projecting upwards from the ends of the box is placed a shaft, to opposite sides of which are secured arms connected with pitmen, the other ends of which latter are attached to the disks. The articles to be washed are placed between the disks, and motion is given to the latter by means of a handle upon the upper shaft.

Claim.—The combination of disks B B on separate shafts, connected to the arms D D by means of the pitmen F F, whereby both disks are moved in opposite directions by one motion of the hand operating on the handle E, as described.

No. 35,683.—MRS. ISABELLA J. H. HOWARD, of San Francisco, Cal.—*Improvement in Abdominal Supporters.*—Patent dated June 24, 1862.—The nature of this invention will be understood from the claim and engraving.

Claim.—The arrangement of the comparatively hard and yielding pads *a a* and *c c*, the triangular spring *e*, the strap *b*, the pad *d*, the elastic straps *g g* and *h h*, and the buckles *i i* and *j j*, substantially in the manner and for the purpose set forth.

No. 35,684.—CHARLES A. HUNT, of Urbana, Ill.—*Improved Clothes Dryer.*—Patent dated June 24, 1862.—To a sliding bar, which may be either fixed to a wall or upon a pedestal, is attached a heel hinge, which supports a box hinge having projecting lips, between which are fixed wooden fingers for holding the clothes, and which project radially, and admit of being moved laterally and folded together when not in use.

Claim.—The combination of the pedestal or slide bar C with the hinges D E and fingers *a*, arranged and operating substantially as and for the purpose specified.

No. 35,685.—P. J. JARRE, of Paris, France.—*Improvement in Repeating Fire-arms.*—Patent dated June 24, 1862.—The trigger is provided with a cogged segment which meshes into a rack on the under side of the slide piece *b*. This slide piece has a reciprocating movement in a grooved guide, and carries a hook projecting from above its upper surface, which is held in an elevated position by means of a spring; it also carries a spring blade, which is designed to produce the progressive movement of the breech bar. Between the gun lock and the rear end of the barrel is a guide bar, which is furnished with a ring interposed to secure contact between the orifices of the breech bar and that of the barrel, and provided with projections to allow the escape of the gases caused by the ignition of the powder during the act of cocking, so that numerous successive discharges of the gun may be effected without heating the barrel. The breech bar is of rectangular form, and is provided with cylindrical openings to receive the cartridges. One of the sides of the breech bar consists of a movable face plate pivoted at one corner, so that by turning the plate the orifices for receiving the cartridges will be disclosed. In the under face of the breech bar are cams or inclined planes for the purpose of being acted upon by a spring in the slide *b*.

Claim.—First, the combination with the trigger *a* of the slide piece *b* when the latter is arranged in relation to the hammer and the breech bar, so as to actuate them to operate by the pulling of the trigger, in the manner and for the purpose set forth.

Second, in combination with the adjustable breech bar, constructed and operating as described, the packing ring *r*, when located between the breech bar and the rear part of the barrel, and when arranged substantially in the manner and for the purposes set forth.

Third, the construction and arrangement of the breech bar, the same consisting of a series of cartridge chambers, set in a slide frame, provided with suitable cams, in combination with the movable rear plate, latch, and other essential appurtenances, as described.

No. 35,686.—GEORGE B. JEWETT, of Salem, Mass.—*Improvement in Artificial Legs.*—Patent dated June 24, 1862.—This invention consists in the employment of a rigid exterior socket, in combination with a removable interior socket, made of some soft material, the form and size of which may be varied to suit the varying size and form of the stump. The leg is connected to the foot by means of a pedestal secured firmly to the leg, and hinged to the foot in such a manner that any required change in the length of the leg or the position of the foot may be readily made, and either the leg or the foot may be replaced without the necessity of constructing the entire limb.

Claim.—First, the rigid socket A, in combination with the removable socket C, operating in the manner substantially as described.

Second, connecting the socket with the foot by means of the pedestal E, having an adjustable connexion with the socket, and being hinged to the foot as described, for the purpose specified.

No. 35,687.—ALGERNON K. JOHNSTON and LORENZO DOW, of New York, N. Y.—*Improvement in Rendering Cartridges Water-proof.*—Patent dated June 24, 1862.—The substances employed in this invention are such as are formed by the action of nitric acid alone, or in combination with sulphuric acid; or by the action of any nitrate alone, or in combination with sulphuric acid or vegetable matter, as cotton, flax, &c., or on the product

of vegetable matter, as wood, &c., by the action of nitric acid

of vegetable matter, as sugar, &c., always dissolving the substance so formed in its proper solvent, which is generally alcohol or ether, or a combination of the two.

Claim.—The application of the said substances and solutions, or any of them, collodion, &c., to the envelope of a cartridge, for the purpose of water-proofing the same, substantially as above described.

No. 35,688.—B. F. JOSLYN, of Stonington, Conn.—*Improvement in Breech-Loading Fire-arms.*—Patent dated June 24, 1862.—This invention relates to an improvement in a breech-loading fire-arm, for which a patent was granted to the said Joslyn October 8, 1861, and it consists in the employment of a curved wedge-formed projection combined with and arranged upon the movable breech of the said fire-arm, so that the metallic cartridge may be partially withdrawn from the barrel during the act of throwing back the movable breech.

Claim.—The curved wedge-formed projection *x*, combined with and arranged on the movable breech B, substantially as and for the purpose set forth.

No. 35,689.—ELIJAH KEMPER, of Thorn Township, Ohio.—*Improvement in Gates.*—Patent dated June 24, 1862.—This invention consists in hanging a sliding gate upon an axis by means of a hinged piece, so arranged that the gate may be slid back and bring equal parts, or nearly so, of its length each side of the axis, upon which it may then be turned with facility to swing out of the way. The gate is also provided with a sliding latch, so arranged as to admit of being slid forward to support the gate when closed, or slid back out of the way when necessary.

Claim.—First, the combination with a sliding gate of the hinged or pivoted piece 2 2, the parts being arranged in such a manner as to operate as set forth and secure the advantages stated.

Second, the combination with a sliding and hinged gate, as above described, of a sliding latch 12, substantially as and for the purposes set forth.

No. 35,690.—NEHEMIAH KIMBALL, of Pascoag, R. I.—*Improved Self-Setting Head-Block for Saw Mills.*—Patent dated June 24, 1862.—This invention consists in the combination and arrangement of a series of devices, as stated in the claim, by means of which the head-block is caused to traverse the log and automatically set the same.

Claim.—The combination and arrangement of dog F, carriage E, with rack I, pinion J, shaft K, ratchet L, pawl M, link N, slide P, bent lever R, and stop pin V, the whole being constructed to operate as described for the purpose set forth.

No. 35,691.—J. H. KNICKERBOCKER, of Philadelphia, Pa.—*Improved Method of Securing Tubes in Tube Sheets.*—Patent dated June 24, 1862.—This invention consists in the employment of a ferrule, having a concave outer surface of slightly taper form and of such diameter that it may be driven into the flue and expand the end of the same, so that it will close snugly aronnd the hole made in the tube sheet to receive the flue, and form a tight and permanent connexion of the flue to the tube sheet.

Claim.—Securing the flues B of boilers in the tube sheets A thereof, by means of the ferrules C, grooved at their exterior, tapered, and driven in the ends of the flues so as to cause the ends of the same to close around both edges of the holes *a* in the tube sheets, and admit of the flue being of equal diameter throughout, as set forth.

No. 35,692.—HENRY KNIGHT, of Jersey City, N. J.—*Improvement in Machines for Moulding Cement Pipe.*—Patent dated June 24, 1862.—This invention consists in the combination of a centrally perforated table, an intermediate centrally perforated and movable platform, an adjustable mould or flask, and adjustable base-supporting and centring plate, adjustable core and a jack screw, all so arranged and operated that a cement pipe, with a square socket in one end, is produced without the necessity of lifting the mould and pipe above the core. With the above is also combined a railway and track, so that when a pipe has been moulded it may be lowered while in the mould upon the truck and run out to a position to be lifted off the machine. With the hard shoulder or enlarged base of the core is combined a pliable washer, for the purpose of relieving the cement about the square socket of the pipe while the core is being withdrawn. The lower or base centring and supporting plate of the mould is so constructed that a portion of it opens and closes across its centre on hinges, for the purpose of admitting the largest end of the mould and then clamping it in position. The rack of the jack screw and the grooves of the frame of the machine are so arranged as to control the core without interfering with its upward movement.

Claim.—First, the combination of the table B, movable platform L, mould or flask M, plate K, core I, and jack screw G H, or its equivalent, the whole constructed and arranged and operating substantially as and for the purposes described.

Second, the combination of the wheeled truck L and railway bars F F with a cement pipe moulding machine, substantially in the manner and for the purpose described.

Third, the combination of the pliable washer with the hard shoulder of the core, substantially as described and for the purpose set forth.

Fourth, the construction of the plate K with flaps *d d* and with apertures of different diameters, substantially as and for the purpose described.

Fifth, the manner of arranging the guides *a* and the short posts E E with the rack bar G and core I, for the purpose set forth.

Sixth, the connexion of the shoulder or collar J to the core I, by means of an adjustable through pin *b*, in the manner and for the purpose described.

Seventh, the lifting of the base plate K and the flask or mould above the truck platform, by means of the ends of the pin *b*, or an equivalent means, substantially as described.

No. 35,693.—HENRY KÜHNE, of Racine, Wis.—*Improved Steering and Propelling Apparatus.*—Patent dated June 24, 1862.—This invention consists in the arrangement of a capstan in combination with a screw propeller placed in the rudder, with gearing for working and and a lever for shifting the blades of the said propeller, so as to set them at various angles, or to bring them parallel with a plane passing longitudinally to the centre of the vessel, for the purpose of preventing them from dragging when it is not desired to use the propeller, as in entering a harbor through intricate channels, or in waters where the navigation is difficult.

Claim.—The combination of the screw propeller F arranged in the rudder and having adjustable blades, the capstan K, shafts L J, gearing M N I G H, and lever S, the whole applied and arranged substantially as set forth.

No. 35,694.—E. B. and J. S. LAKE, of Absecom, N. J.—*Improvement in Circuit-closers for Telegraphs.*—Patent dated June 24, 1862.—This invention consists in hinging a circuit-closer, of the form shown in the engraving, to a telegraph key, and which works loosely in a slot in the said key, so that when the operator leaves the instrument after a message has been sent, the circuit-closer, by its own weight or by the aid of a spring, falls back upon the lip of the anvil and forms a self-closing circuit, thus avoiding the evil consequence arising from the neglect to close the circuit under the old form.

Claim.—The circuit-closer D combined with the telegraph key C, substantially as set forth.

No. 35,695.—J. W. LAWSON, of Ann Arbor, Mich.—*Improvement in Machines for Upsetting Tires.*—Patent dated June 24, 1862.—This invention consists in the arrangement of parts designated in the claim, by means of which, when the tire is sufficiently heated and placed in the machine, it may, by turning the cam, be pressed together or upset, thereby saving the labor and cost of cutting out a piece and welding anew.

Claim.—The combination and arrangement of the sliding bed and stationary bed, stationary jaws and sliding jaws, wedge-shape keys, cam and lever, substantially as set forth and described, and for the purpose specified.

No. 35,696.—G. W. LLOYD, of Detroit, Mich.—*Improved Mode of Constructing and Arranging Foot-lights for Theatres.*—Patent dated June 24, 1862.—This invention consists in placing the light in a trough sunk in the front of the stage below the ordinary floor level, in which is placed a continuous reflector, so as to reflect the light at such an angle and in such direction as may be desired. Lights of any color may be substituted and inserted from below. A covering of fine metal wire cloth is hinged to the trough above the burners.

Claim.—The position and mode of arrangement of the lights with the continuous reflector, as distinguished from the mode now ordinarily in use.

Also, the power of throwing colored lights on the stage, as above described.

Also, by means of the guard formed by the sunken trough and the wire cloth covering, greatly increased safety to performers.

No. 35,697.—W. R. MANLEY, of New York, N. Y.—*Improved Feathering Paddle Wheel.*—Patent dated June 24, 1862.—The nature of this invention is explained by the claim, the object being to distribute upon the frame of the wheel the force caused by the resistance offered by the water to the passage of the bucket through it, so as to prevent torsion.

Claim.—Making the length of the arm or crank 6 so proportionate to the distance which the horizontal centre of the axis is from the horizontal centre of the bucket, that the centre of the journal bearing in the outboard bucket flange, and the centre of the journal bearing in the feathering flange, are equidistant from a straight line projected indefinitely, from the centre of the journal bearing in the inboard bucket flange through the centre of the bucket, as has been described and as is represented in figure 3.

No. 35,698.—RICHARD MARTIN, of Brooklyn, N. Y.—*Improved Packing for Piston and Valve Rods.*—Patent dated June 24, 1862.—This invention is explained by the claim.

Claim.—The packing ring composed of a folded strip of woven hemp with a lining of wire gauze, the whole being constructed substantially as and for the purpose set forth.

No. 35,699.—J. C. MAYBERRY, of White Rock, Ill.—*Improvement in Cartridges.*—Patent dated June 24, 1862.—This invention consists in fitting the cartridge with a loose bottom, which is driven into the body of the cartridge as the latter is rammed down upon or against the breech of the gun, and so caused to contract circumferentially and allow the loose powder to escape, the object being to obviate the necessity of biting or tearing the cartridge before its insertion into the gun, and prevent the consequent waste of powder.

Claim.—The construction of a cartridge with a loose contractible bottom B and a central peg *d*, or its equivalent, applied and operating substantially as and for the purpose specified.

No. 35,700.—H. W. OLIVER, of New Haven, Conn.—*Improvement in Kilns for Drying Lumber.*—Patent dated June 24, 1862.—This invention consists in providing the kiln with narrow steam-chambers extending the whole length of the sides of the kiln and up to the eaves of the roof, and separated from the kiln by perforated and wadded partitions. Below the ledges, upon which the lumber is supported, is arranged along the centre of the kiln a steam-boiler with pipes leading to the steam-chambers at the sides.

Claim.—Providing a kiln with steam chambers D D, separated from the drying chamber or central portion of the kiln by means of perforated or reticulated and wadded partitions, and applying heat below the lumber to operate in conjunction with the steam admitted through the said partitions, substantially as specified.

No. 35,701.—J. J. PALMER and A. PLAMONDON, of Chicago, Ill.—*Improvement in Grain Separators.*—Patent dated June 24, 1862.—This invention consists in the employment of a series of parallel screens and chutes, inclining in opposite directions to each other, so that the grain may be conveyed by the chutes to the head of each screen successively, and subjected to a blast in passing over each one. The fan case communicates with the lower end of a spout, which extends upward at the back of the shoe, and in the back of the spout is a series of openings communicating with the spaces between the screens and the chutes. The inner side of the shoe projects up above the level of the slide, which is arranged to pass underneath the hopper, so that when the shoe is in motion, the upper end of the said side of the shoe serves as an agitator, and insures a uniform discharge of grain from the hopper, and prevents the choking of the same.

Claim.—The inclined screens I, and chutes J, placed in a suitable shoe B, in combination with a blast spout H, provided with openings *d*, arranged relatively with the screens to operate as and for the purpose set forth.

Also, the extension of the upper end of the inner side *i* of the shoe B, above the discharge orifice of the hopper L, substantially as shown, so as to have a moving surface at one side of the discharging orifice of the hopper, and a stationary surface at the opposite side, for the purpose specified.

No. 35,702.—LEONARD PARKER, of Winterset, Iowa.—*Improvement in Straw Cutters.*—Patent dated June 24, 1862.—This invention consists in the employment of side knives, which are secured to the ends of the sides of the straw box or to the slides of the cutting frame, and act in connexion with the W-shaped knife of the cutting frame, and a knife secured to the end of the bottom of the straw box. At the front end of the straw box is a spring bottom provided with a spiral spring.

Claim.—The use of the side knives *m* and *n*, when used in combination with the knives *l* and *k*, spring bottom *p*, and the spiral spring *o*, as described and represented.

No. 35,703.—S. P. PARMELEE, of New Haven, Conn.—*Improvement in Piano-fortes.*—Patent dated June 24, 1862.—The nature of this invention is explained by the claim. The inventor says: "In carrying out my invention, a semi-tubular or arch-shaped bridge is projected directly from the wrist-pin plate, the two being cast in one piece. A brace springs from the upper surface of this bridge, and thence passes horizontally to, and is joined with, the hitch-pin plate."

Claim.—Constructing the wrist-pin plate of the metallic string frame with a metallic projection G to receive and support each of the straining pin bushings, in manner as specified.

Also, making each of the bushing sockets with an opening *h* extending out of its bottom, and with respect to the bushing, as set forth.

Also, arranging the string holes or passages through the bridge, and directly underneath the junctions of each of the braces and the bridge, in combination with arranging the hitch pin of the string underneath the bridge, all substantially as described.

Also, the arrangement or combination of the arched bridge with the socket plate and each of the braces, in a manner substantially as described, the bridge thereby serving to connect the brace and the plate.

Also, insulating each straining pin from the iron frame by means of a wooden bushing, or its equivalent.

No. 35,704.—S. P. PARMELEE, of New Haven, Conn.—*Improvement in Piano-fortes.*—Patent dated June 24, 1862.—This invention consists in constructing the iron or string frame with a metallic bracket or standard extending downward at the inner edge of the wrist-pin plate, and provided with a foot or flanch to rest directly upon the top of the bottom frame of the case. The iron frame has no direct connexion with either the sounding board or that part of the case which extends above the bottom frame. The sounding board is carried across and secured to this part of the case, and is provided with an opening through which the hammers can play in order to reach the strings when strained across their frame.

Claim.—Constructing the iron or string frame with the metallic bracket or standard B, for connecting the iron frame with the bottom frame, as specified.

Also, supporting the iron frame on the bottom frame, and insulating the former as described from the sounding board, and those parts of the case which extend above the bottom frame.

Also, the above-described arrangement of the top plate, each of the braces, the bridge, and the wrist-pin plate of the iron frame.

Also, arranging the iron frame bracket or supporter, with respect to the iron frame and the sounding board, in manner so as to pass down through the hammer openings of the sounding board, as described.

Also, extending the sounding board across the entire interior of the case, viz., from side to side and end to end thereof, and making such board with a passage for the hammers and the frame socket, as described.

No. 35,705.—THOMAS POOL, of Brunswick, Ohio.—*Improved Clothes Wringer.*—Patent dated June 24, 1862.—In this device the two rollers are caused to yield equally and simultaneously by means of two long springs extending across the width of the machine, and placed the one on the top of the upper cross-piece, and the other under the lower cross-piece to which they are attached by screws. The pressure is communicated from the springs to the journals of the roller shafts by means of sliding bearing blocks, held in place by a vertical slot in each, which plays over a screw or pin in the frame of the machine.

Claim.—The combination and arrangement of the spring or springs M N, sliding bearing blocks P P Q Q, having guide slots and bearings *d d g g*, and stationary guide screws or pins *f f* applied to the rollers, substantially as and for the purposes specified.

Also, giving an equal, or nearly equal, elastic pressure to both rollers simultaneously by means of the double long springs M N arranged in combination with the slotted frame, substantially as and for the purposes set forth.

No. 35,706.—MARY JANE PULTE, of Cincinnati, Ohio.—*Improved Composition for Cleaning Gloves.*—Patent dated June 24, 1862.—In this composition use is made of hard soap, such as oleine or white castile, dissolved in water, to which, when boiled, is added a quantity of commercial alcohol, and afterwards soft water, the whole forming a paste when ready to be applied.

Claim.—The within-described composition of matter for cleaning kid gloves, combined in the proportions and in the manner substantially as set forth.

No. 35,707.—W. H. RICHARDS, of Newton, Mass.—*Improvement in Head Cushions to Prevent Sun-stroke.*—Patent dated June 24, 1862.—This invention consists in the use of a material which shall be a non-conductor of heat, combined with a material which is an absorbent or retainer of moisture, the whole being held together by layers of cloth or other suitable material, so as to constitute a cushion to be worn on the head of a person exposed to the heat of the sun.

Claim.—A head protective cushion, made and to be used substantially in manner and for the purpose specified.

No. 35,708.—GELSTON SANFORD, of New York, N. Y.—*Improvement in Machinery for Separating Fibres from Plants.*—Patent dated June 24, 1862.—This invention is designed as an improvement upon the machine patented to the said Sanford February 19, 1861. The claim explains the nature and object of the invention.

Claim.—The combination of the cylinder armed, substantially as described, with bars formed for scraping and combing, or either with the endless belt, also armed, substantially as described, with bars for scraping and combing, or either, substantially as and for the purpose specified.

Also, in combination with the cylinder and endless belt armed with bars, substantially as described, the covering of the periphery of the cylinder with elastic substance between the bars, that the teeth or edges of the bars may act against a yielding surface, the better to perform the operations required, substantially as described.

Also, the elastic griping feed mechanism, substantially as described, in combination with the mechanism, substantially such as described, which crushes the fibre-yielding plants, and separates the impurities from the fibres, substantially as described.

Also, arranging the two series of moving combs, so that the combs on one of the moving surfaces shall act in the spaces between the combs on the opposite moving surfaces, substantially as described, whether the two series of combs be attached to a belt and a cylinder or to any other form of moving surfaces, so long as the said surfaces move at or nearly the same velocity.

No. 35,709.—GELSTON SANFORD, of New York, N. Y.—*Improvement in Machinery for Dressing Flax and Hemp.*—Patent dated June 24, 1862.—This invention consists in the employment of an endless belt passing around rollers mounted in a frame and so arranged in relation to a cylinder, that the upper surface of the belt will lap around a segment of the cylinder and bear against fluted rollers which are arranged upon the periphery of the cylinder. To the surface of this belt are secured cross-bars having ears at each end to receive the journals of rollers similar to those upon the cylinder, and between these rollers are also se-

cured to the surface of the belt bars, with hatchel teeth similar to those on the bars upon the cylinder. As the cylinder is rotated, the rollers upon its periphery act against the rollers on the apron, which is thereby caused to travel in the same direction with the cylinder.

Claim.—The combination of the two series of breaking rollers, one series arranged on a cylinder and the other on an endless belt, or on the equivalents thereof, the one series being driven and imparting motion to the other series, substantially as and for the purpose described.

Also, the combination of the two series of hatchels arranged on the cylinder and on the belt or endless apron, or the equivalents thereof, the one series being driven and imparting motion to the other series, substantially as and for the purpose described.

Also, the two series of hatchels, in combination with the two series of breaking rollers, arranged on a cylinder and endless apron or belt, or their equivalents, when one of the said series of breaking rollers and hatchels is driven and imparts motion to the other series, substantially as and for the purpose described.

Also, the feel rollers, one of which is elastic, in combination with the cylinder and belt or endless apron, or their equivalents, and provided with breaking rollers and hatchels, or either, substantially as described.

No. 35,710.—GELSTON SANFORD, of New York, N. Y.—*Improvement in Machinery for Breaking and Cleaning Hemp and Flax.*—Patent dated June 24, 1862.—In a suitable frame are placed two bars, the adjacent faces of which are fluted longitudinally, the flutes from the upper to the lower edge being made gradually smaller for the purpose of gradually breaking the woody parts of the plant. The ends of the bars are fitted to slide in longitudinal ways in the sides of the frame, the outer face of one bar being connected by rods to a crank shaft driven by any suitable motor so as to give to the said bar a rapid reciprocating motion towards and from the other bar, which latter is capable of yielding to the violence of the blows and the varying thickness of the material operated upon by means of springs placed behind its ends in the ways.

Claim.—In combination with reciprocating fluted surfaces for breaking and pounding, whether the flutes be made of equal or gradually less size, a reciprocating whipping or jarring rod, substantially as and for the purpose specified.

No. 35,711.—S. M. SELEY and PETER HOPKINS, of Peoria, Ill.—*Improved Piston for Steam Engines.*—Patent dated June 24, 1862.—This invention relates to a method of construction and arrangement of internal valves for admitting steam to the interior of the piston in order to expand the packing rings. The operation will be understood from the claim.

Claim.—Admitting steam within the piston from one side and preventing its escape on the other side, alternately by means of valves sliding on stationary longitudinal pins, and covering apertures in the respective plates or heads of the piston, substantially as and for the purpose set forth.

No. 35,712.—B. H. SMITH and G. W. ARCHER, of Ipswich, Mass.—*Improvement in Harvesters.*—Patent dated June 24, 1862.—Upon the axle of the machine is permanently secured a wheel H provided with teeth at one side of its periphery, and upon the same axle is hung loosely a bar I braced by a curved arm J, the rear end of which is also hung loosely on the axle, the front end being secured to the bar I near its front end. To the front part of the bar I is secured a pendent arm, which has the finger bar L connected to its lower end by a hinge or joint to admit of the finger bar being raised to a vertical position when not in use. To the bar I are attached the bearings of a rock shaft provided with two arms or projections, which are acted upon by the teeth of the wheel H, and by means of which a reciprocating movement is communicated to the cutter bar. The finger bar may be elevated when desired by the operator by means of a lever V attached to the main frame.

Claim.—The combination of the rock shaft S, finger bar L, caster wheel Y, and lifting lever V with the swinging bar I, driving wheel H, and frame A, as shown and described, so that there will be a self-acting adjustment of the cutters as the machine passes along over the earth, and so that the cutters may at any time be instantly lifted from the ground, all as specified.

Also, the combination of the curved swinging arm J with the bar I and axle B, as and for the purpose shown and described.

No. 35,713.—J. D. SMITH, of Peoria, Ill.—*Improvement in Seed Planters.*—Patent dated June 24, 1862.—This invention consists in an arrangement of a seed gauge, levers, and furrow share, whereby the seed gauge is adjusted automatically from the movement of the lever by which the furrow share is raised and lowered, so that when the machine is to be rendered inoperative, the driver, by operating the lever which raises the furrow share out of the ground, will at the same time shut off the flow of seed from the hopper, the seed gauge at the same time admitting of being adjusted in various positions to regulate the flow or discharge of the seed as may be required. The furrow share is attached to the shaft, by which it is raised and lowered by means of a spring, whereby the furrow share, when adjusted to its work, is kept in the ground, and at the same time allowed to yield or rise in order that it may pass freely over obstructions that may be in its path.

Claim.—First, the gauge plate G and lever H arranged with the shaft I, provided with the pin k and lever M, substantially as shown, to operate as and for the purpose set forth.

Second, the set screw K, in connexion with lever H, gauge plate G, and spring J, for the purpose of regulating the discharge of the seed, as specified.

Third, attaching the furrow share bar P to the shaft I by means of the spring O, as and for the purpose set forth.

No. 35,714.—F. B. STEVENS, of New York, N. Y.—*Improved Method of Heating Feed Water for Steam Engines*—Patent dated June 24, 1862.—Patented in England October 10, 1861.—This invention consists in the employment of an additional eduction valve, which is placed on the cylinder midway between the top and bottom, so that the piston passes the port of this valve in the course of each stroke; and, as this valve is never required to open until the piston has performed more than one-half of its stroke, it can be made to serve as the additional eduction valve of both strokes. The nozzle port, leading from this eduction valve to the cylinder, is formed by a series of small holes, their size in a vertical direction being less than the width of the narrowest packing ring used. The machinery that opens and closes the additional valve is simplified by placing a tappet on the eccentric rod that works the main valves in such a manner that it opens the eduction valve to its full extent when the eccentric opening the main valves, is midway in its stroke or throw, thus opening and closing the additional eduction valve twice while the engine makes one revolution.

Claim.—First, the additional eduction valve, communicating with the cylinder of a steam engine by an aperture placed at or near the middle of the length of the cylinder, in combination with apparatus for heating the feed water of steam engines by steam withdrawn from the induction side of the piston, substantially as shown and described.

Second, forming the aperture or nozzle last named by a number of small holes *a a a* pierced through the middle of the cylinder, substantially as shown and described.

Third, opening and closing the additional eduction valve, when placed in the middle of the cylinder, by a motion derived from the eccentric that works the main valves of the engine, substantially as shown and described.

Fourth, the diaphragm in the closed heater and the valve attached to the cup, or its equivalent, and balanced by the weight, in combination with the apparatus for heating the feed water of steam engines by steam withdrawn from the induction side of the piston.

No. 35,715.—J. A. THAYER, of East Boston, Mass.—*Improvement in Tools.*—Patent dated June 24, 1862.—This device consists of a hammer head composed of a perforated ball or bulb, from which extend at opposite sides two metal shafts provided, respectively, with a hammer face and claw. To the under side of the hammer head and bulb, is attached a shank hollowed out to fit a scale or bar, along and upon which it is capable of being slid and adjusted by means of a thumb screw. The opening of the bulb is of sufficient size to conceal within its cavity the claw formed upon the end of the scale.

Claim.—First, a shank or bar graduated to form a scale, the ends of which are shaped respectively into a screw-driver and claw, as described.

Second, a handle or sleeve capable of adjustment upon and along the said shank or bar, substantially as set forth.

Third, a hammer head adjustable along the said shank or scale and provided with a bulging centre piece so arranged as to act as the fulcrum to its own claw as well as to that of the bar, the whole being constructed, arranged, and combined as set forth.

No. 35,716.—J. D. TIFFT, of Cuyahoga Falls, Ohio.—*Improvement in Clothes Wringer and Mangle Combined.*—Patent dated June 24, 1862.—This invention consists in the employment of two sets of rollers, one set being made of hard wood and used for mangling, and the other set of some elastic material, to be used in wringing the clothes; the one set to be substituted for the other as the machine is required for the separate processes. Above the boxes which sustain the upper roller journals, are placed elastic springs G, over which are semicircular bearings *c d*. Between these bearings are placed wedges *m n*, through the arms of which pass pins, thus connecting them to an eccentric fulcrum formed of two horizontal plates upon a shaft which passes through the upper cross-bar and is operated by a lever. The turning of the lever causes the wedges to be forced between the bearings *c d*, and thus increases the pressure on the rollers.

Claim.—The eccentric fulcrum P, arms *m' n'*, wedges *m n*, bearings *c d*, in combination with the elastic springs G, rollers C C′ and D D′, in the manner described, when operating conjointly for the purpose set forth.

No. 35,717.—BENJAMIN TUKEY, of Fairfield, Maine.—*Improved Fruit-gatherer.*—Patent dated June 24, 1862.—This device is composed of a series of fingers or standards secured at their lower ends to a circular disk of wood and curved at their upper ends. Just below the curved part is secured a cutter of tin or other suitable material for separating the fruit from the limb. To the under side of the circular disk is attached a handle.

Claim.—The method described of gathering fruit without danger of bruising the fruit and without ascending the trees, using for the purpose the instrument described, or any other substantially the same.

No. 35,718.—C. A. UHL, of Millersburgh, Ohio.—*Improvement in Cultivators.*—Patent dated June 24, 1862.—This invention consists in so connecting the cross beam to which the shovels are attached, by means ot rods, to a lever, that, as the machine is moved along the operator may, by the pressure of his foot upon the lever, elevate the shovels from the ground when desired. The shovel arms are adjusted vertically by means of pins placed in holes in a guide bar or band to which they are fitted.

Claim.—First, the arrangement of the lever L, rods *m*, beam I, and ploughs E, as described, for the purpose of lifting the ploughs from the earth as described.

Second, the guides F, for regulating the depth of the furrows, in combination with the pins inserted in the holes *f*, in the said guide-bands F, substantially as described and shown.

No. 35,719.—JOSEPH VENDRAND, of Paris, France.—*Improvement in Planes.*—Patent dated June 24, 1862.—Patented in England, March 4, 1861.—This invention consists in a construction and arrangement of parts by which an additional regulation of the plane iron is attained, so as to preserve the parallel position of the cutting edge with reference to the face of the plane, whilst it is raised or lowered by the adjusting screw to adapt it to the cut of the proper thickness of shaving.

Claim.—First, the combination with the plane iron A, provided with mortises R, as described, of the adjusting screw V, sliding block B, and tenon *a*, the said tenon and mortise being relatively so constructed as to allow the iron sufficient lateral play to permit the perfect adjustment of the edge parallel to the face of the plane, as set forth.

Second, the combination of the nut *a'*, which secures the cap to the cutting iron, with the lever E, and ears E' E', as and for the purpose set forth.

Third, the arrangement of the lever E and screw *e*, as described—that is to say, in such a manner that the screw shall take its point of support upon the top of the plane, and extending up through the nut E2, terminate in a head for operating above the lever E, as set forth, instead of behind it, where it would be in the way of the operator.

No. 35,720.—CHARLES WANZER, of New York, N. Y.—*Improved Cement for Slate Roofing.*—Patent dated June 24, 1862.—The nature of this invention is explained by the claim.

Claim.—A combination of grease pitch with the quicklime or hydrate of lime, or the chloride of lime or bleaching powder, Venetian red or other ochre, and linseed or other oil, about in the proportions specified, to form a cement for the purpose set forth.

No. 35,721.—P. L. WEIMER, of Lebanon, Pa.—*For Forming Moulds for Shot and Shells.*—Patent dated June 24, 1862.—The object of this invention is to provide a means for preparing a sand mould effectively and with great rapidity, within which a solid shot or shell may be cast, so that the cost of casting of a large shot or shell shall not exceed that of a small one. The flask which receives the sand composing the mould is rotated, while the sand is supplied to the flask, and is being compacted by rollers which, with the shaft, rises as the mass increases in thickness. A reamer and polisher are attached to upright shafts, supported in brackets fastened to central beams so fitted as to rise under the action of foot levers, and are provided with driving pulleys by means of which a rotary motion is communicated to their shafts.

Claim.—First, rotating the flask which receives the sand composing the mould, while the sand is supplied to the flask, and is being compacted by one or more rollers, for the purpose set forth.

Second, forming the cavity in the mould within which the shot or shell is to be cast by means of a rotating reamer.

Third, a rotating polisher for finishing the cavity formed by the reamer, for the purpose set forth.

No. 35,722.—W. H. WELLSTEED, of Buffalo, N. Y.—*Improvement in Skates.*—Patent dated June 24, 1862.—This invention consists in constructing the front part of the runner of the skate with a joint, and applying thereto a spring, the toe of the runner projecting over the top of the stock, and provided with an elastic pad, which is made to bear or press upon the foot, and, in connexion with a screw or other heel fastening, serves to attach the skate to the foot without the use of straps.

Claim.—The jointed toe D of the runner, spring E, and a suitable pressure spring or pad F in connexion with the screw C, or other proper heel fastening, substantially as and for the purpose set forth.

No. 35,723.—T. E. M. WHITE, of New Bedford, Mass.—*Improvement in Artificial Legs.*—Patent dated June 24, 1862.—The nature of this invention will be understood from the claim.

Claim.—First, a perfectly ventilated and pliable socket constructed of steel braces covered with canvas, and surrounded by wire gauze, as described.

Second, a ratchet and catch in the knee-joint, as set forth.

Third, a lever, for bringing the catch in contact with the ratchet by means of the weight of the body, and liberating it, as specified.

No. 35,724.—DUTEE WILCOX, of Providence, R. I.—*Improvement in Sleeve Fasteners.*—Patent dated June 24, 1862.—This device is formed of a metallic body or back to which is

hinged a metallic tongue bent at each end and made to be sprung upon a hooked guard projecting from the other end of the body or back, it being designed more particularly to fasten the sleeve of a child's dress when looped at the shoulder.

Claim.—The improved sleeve catch-up or fastener, as made with the duplex hooked spring-tongue B and with the guard hook C, constructed, arranged and applied to the body part A in manner and so as to operate substantially as specified.

No. 35,725.—FENN WILLCOX, of Newark, N. J.—*Improvement in Gig Sawing Machines.*—Patent dated June 24, 1862.—The object of this invention is to obtain a muley or gig sawing machine which will admit of saws of different lengths being secured in it with facility, and also admit of more or less rake being given to the saw as circumstances may require. The tension of the saw is regulated as desired by means of a spring in connexion with certain gearing so that the machine may be adapted for sawing stuff of various thicknesses.

Claim.—First, the frame D constructed as shown in connexion with the plate S attached to said frame D by hooks *k*, as and for the purpose set forth.

Second, the adjustable plate R connected by a hinge or joint *j* to the plate S, and operated by a set screw *n**, for the purpose of regulating the rake of the saw, as set forth.

Third, connecting the frame D to the shaft G by means of the strap E and pulley F, the latter being connected to its shaft G by the clutch H, to admit of the adjustment of the frame D, as described.

Fourth, the combination and arrangement of the gearing I J and spring L, for the purpose of straining the saw N, as set forth.

Fifth, the roller C', when placed in the adjustable plate B', and attached to the vertically adjustable plate D', as and for the purpose set forth.

No. 35,726.—R. P. WILSON, of New York, N. Y.—*Improved Clothes Wringer.*—Patent dated June 24, 1862.—This invention consists in the application to the pressure rollers of endless India-rubber belts fitted on loose pulleys placed upon the journals of the rollers, whereby the desired pressure upon the rollers is obtained.

Claim.—The combination of the rollers C C', pulleys E E F F, and endless India-rubber belts G G, arranged and applied to an upright framing, substantially as and for the purpose set forth.

No. 35,727.—A. I. AMBLER, of Milwaukie, Wis., assignor to Himself, R. N. AMBLER, and WARRICK MARTIN, of the same place.—*Improvement in Railroad Car Brakes.*—Patent dated June 24, 1862.—This invention consists in the employment of a rotating rod or shaft C placed underneath each car, and having upon it four cams, consisting of circular disks, having one side formed with a bevelled surface and made to bear against friction rollers fitted upon the brake bars. The rotating shaft C may be operated from the locomotive by connecting it with a shaft N on the locomotive, which is rotated by the piston of the steam cylinder in connexion with a rack and pinion. On the front end of each car-frame is placed a vertical shaft, upon the lower end of which is a bevel wheel which gears with a wheel upon the shaft C. This vertical shaft P is encompassed by a tubular shaft S, each turning independently of the other. To the lower part of the tubular shaft S is attached a chain connected to the brake bars, thus admitting of the brakes of each car being operated separately or with those of the whole train. The ends of the rotating shaft C are provided with cross-bars, having a pin fitted in one end and a hole near its opposite end, so that the pin of one bar fits in the hole of the adjoining bar, by which means a connexion is formed between all the rods of the several cars.

Claim.—First, the rotating rod or shaft C, in connexion with one or more cams D, either placed on the rod or shaft, or so connected therewith as to be turned by it and actuate the brakes, as described.

Second, operating or turning the rod or shaft C from the locomotive by means of a steam cylinder J, having its piston rod K provided with a rack L, which gears into a pinion M on the shaft N, connected with the rod or shaft C, substantially as set forth.

Third, the shafts P S, fitted one within the other, and connected, one P to the rod or shaft C, and the other S directly to the brake bars, substantially as and for the purpose specified.

Fourth, the draw heads or couplings formed of the cross-bars *f*, each provided with a pin *g* and a hole *h*, substantially as set forth.

No. 35,728.—I. S. BARBER, of New York, N. Y., assignor to Himself and L. N. FULLER, of the same place.—*Improvement in Cigar Machines.*—Patent dated June 24, 1862.—This invention consists in the employment of two concave rollers, around and between which, so as to form a pocket, is arranged an endless belt, which is kept distended by means of a tightening roller hung in a frame and capable of being raised or lowered, so as to tighten or loosen the belt at either end to vary the size of either end of the cigar. A movable desk or bench is arranged to be brought in contact with one of the concave rollers. Attached to a gear wheel is a sleeve D, and also to a circular knife which comes in contact with a smooth surface or die, cutting the wrapper to form the head of the cigar.

Claim.—First, the combination of the concave rollers A and A′, and the roller L, whether of wood or metal, with the endless belt M and desk O, when combined and used for the purpose of manufacturing cigars, in the manner described.

Second, also, in combination with the foregoing first claim, the loose sleeve D, header J, circular knife H, and circular die I, the same being constructed and acting together to perfect the operation of the manufacture of cigars, as and in the manner described.

No. 35,729.—H. V. BUTLER, of New York, N. Y., and J. C. HOADLEY, of Lawrence, Mass., assignor to H. V. BUTLER.—*Improvement in Device for Changing Speed in Machinery.*—Patent dated June 24, 1862.—This invention consists of an arrangement of mechanism by which the speed of machinery may be changed at will, expeditiously and without any cessation of movement.

Claim.—The combination of the collar E, its attached pinion F, and the pulleys T M, with the shaft D, pulley P, clutch K, gears G I J, and belt shipper Q, in the manner and for the purpose shown and described.

No. 35,730.—Z. E. COFFIN, of Newton Centre, Mass., assignor to Himself and W. P. HUNT, of Boston, Mass —*Improved Capstan.*—Patent dated June 24, 1862.—Upon a stationary spindle is fitted to turn freely a hollow shaft, the lower end of which is expanded and provided with pawls upon its rim, fitting in corresponding ratchet teeth on the foundation plate. The top of the hollow shaft is also enlarged to carry studs, upon which are placed the gears Q, which mesh into a pinion and also into an internal gear fixed in the top of the capstan barrel, so that the latter can be driven as a simple capstan turning freely upon the fixed spindle, but becoming stationary when a more powerful motion is required, the lever head being reversed and thus bringing the gears into action.

Claim.—The arrangement of the hollow shaft C, within the capstan barrel and upon the fixed spindle B, said hollow shaft being arranged to carry the gears Q above, and the pawls G upon an expanded rim at the bottom, and so as to freely turn upon the fixed spindle for the simple motion, but becoming stationary when the gears are brought into action by reversing the motion of the lever head, substantially as and for the purposes set forth.

No. 35,731.—SAMUEL FRENCH, of Boston, Mass., assignor to Himself and SIDNEY ALLEN, of Newton, Mass.—*Improvement in Safety Pockets.*—Patent dated June 24, 1862.—This invention consists in providing the jaws of a pocket with a locking apparatus composed of a spring bolt and catch. From the inner jaw extends a thin flexile spring or bar of steel, to which is attached a bolt actuator, the end of which spring may be brought to any convenient position on the body, so that when the jaws of the pocket are locked, they can be unlocked only by operating the flexile spring and thereby prevent the pocket from being picked.

Claim.—The combination of the flexible arm and bolt actuator, or their equivalent or equivalents, with the pocket and its fastening apparatus, the whole being substantially as specified.

No. 35,732.—W. FROEHLICH, of Harburg, Kingdom of Hanover, assignor to MORRIS RICHTER, of New York, N. Y.—*Improved Mattress.*—Patent dated June 24, 1862.—This invention is explained by the claim.

Claim.—A mattress having its cover or case divided into a series of compartments of trilateral form, by means of a partition of zig-zag form, stitched or otherwise secured alternately at about equal distances apart to the top and bottom of the cover or case, substantially as shown and described.

No. 35,733.—JOHN GALLAGHER, of Brooklyn, N. Y., assignor to Himself, CHRISTOPHER DORFLINGER, ANSON JUDSON, and ANTOINE REGAN, of the same place.—*Improvement in Lighting and Trimming Lamps.*—Patent dated June 24, 1862.—This invention consists in suspending the wick tube upon journals secured in the sides of the body of the burner, one of the journals being provided with a crank so that the tube can be readily turned down from a vertical position. At one side of the body of the burner is an opening fitted with a door or slide, through which opening the tube protrudes when turned down and admits of filling, trimming, or lighting the lamp without the necessity of removing the chimney.

Claim.—First, suspending the wick tube C by means of the journals I I, or their equivalents, and operating substantially as and for the purpose described.

Second, the opening B, with its door D, for the purposes described and set forth.

No. 35,734.—JOHN GAULT, of Boston, Mass., assignor to Himself and W. B. BARKALOW, of New York, N. Y.—*Improvement in Chain Shot.*—Patent dated June 24, 1862.—This invention consists of an elongated hollow projectile, divided transversely at or near its centre, the two parts being kept together by means of dovetails, and connected by a chain, so that they will keep together during their flight but separate when meeting with any resisting object, and bring the chain into operation.

Claim.—An elongated chain shot divided transversely, when the two portions are united by dovetails or their equivalents, substantially as described.

No. 35,735.—JOSEE JOHNSON, of New York, N. Y., assignor to Himself and JOHN WARD, jr., of Brooklyn, N. Y.—*Improved Ironing Table.*—Patent dated June 24, 1862.—This invention consists in constructing an ironing table with a top in the form of a broad press-board, and with a central supporting frame hinged thereto, open at the end beneath the narrow end of the top, and supported upon three legs, two of which are capable of being folded into a line with the frame, or of being extended to support the table, the top being so hinged to the frame as to be folded over parallel therewith for storage, or turned up in a horizontal position for use.

Claim.—The construction and use of an ironing table, with a tapering top A, and with a central frame B *b*, open at one end, as shown by M, to allow the slipping on of skirts and the like, supported laterally by folding legs F F, which are capable of being folded into a line with the said frame, so as to form a novel table possessing the advantages set forth.

No. 35,736.—NELSON KIDDER, of Moscow, Iowa, assignor to B. F. LINVILLE, of the same place.—*Improvement in Ditching Machines.*—Patent dated June 24, 1862.—From the rear or central part of the draught beam projects downward and forward a ploughshare, and hinged to the central frame are two side frames I I, which are held at any height or angle of obliquity by means of segments passing through a standard and secured by a pin. The central frame is supported at its rear end by an adjustable caster wheel, the shank of which fits in a suitable socket, and is held at any height by a set screw. To the rear end of the side frames I are attached adjustable rollers for compressing and smoothing the sides of the ditch.

Claim.—The combination of the share E, and adjustable expanding wings I I, adjustable supporting wheel H *h*, and rollers O, all constructed and operating substantially as and for the purposes set forth.

No. 35,737.—LAFAYETTE LOUIS, of Buffalo, N. Y., assignor to G. A. PRINCE and THOMAS STEPHENSON, of the same place.—*Improvement in Melodeons.*—Patent dated June 24, 1862.—This invention consists in the application of a device to the keys of melodeons and organs, so that when a key or note is struck by the performer, it will be held down, and the valve kept open in a manner to prolong the sound until another key is struck, each key when struck instantly releasing the previous key, and prolonging its own sound until another key is struck, thereby enabling the performer to sustain or prolong at will any note in the base, while both hands are free to play upon other parts of the key-board.

Claim.—The construction of a device, named the "basso tenuto," and the use and combination thereof with a melodeon, organ, or piano-forte, for the purposes and substantially as described.

No. 35,738.—JOHN NORTH, of Middletown, Conn., assignor to W. H. and J. A, DANIEL S. and S. F. APPLETON, of New York, N. Y.—*For Paper Folding Machine.*—Patent dated June 24, 1862.—The nature of this invention will be understood from the claim.

Claim.—First, the combination of pressure rollers for holding the paper upon and in working contact with propelling rollers, with such propelling rollers and folding rollers, the latter folding and presenting paper which is then moved by the former, the combination being substantially such as specified.

Second, propelling rollers and pressure rollers acting in combination, as described, in combination with wires or rods to support sheets of paper, the combination being substantially such as specified.

Third, in combination with a pair of folding rollers, a pressure roller applied substantially as described, to compress paper against one of the folding rollers, the combination acting substantially as set forth.

Fourth, in combination with folding mechanism mounted upon a vibrating frame or vibrating arms, a delivering board constructed, arranged, and operating substantially in the manner described.

Fifth, in combination, a compresser or compressing surface, a delivering board, having a mode of operation substantially as described, a table or support for folded paper, and other surfaces parallel or nearly so to the compressing surface, which latter gradually move away from the compression as folded sheets are introduced, the whole being constructed and acting substantially as specified, and in combination with a proper apparatus for folding paper.

Sixth, in combination with a delivering board, a compresser acting substantially as described.

Seventh, in combination with proper blades or knives for creasing paper and introducing it between folding rollers, folding rollers fluted parallel to their axes operating upon the paper and in connexion with the blades, substantially as set forth.

Eighth, actuating the folding rollers of a paper-folding machine by means of stationary-toothed sectors, substantially such as described, when such rollers are mounted upon and carried by a counterpoised vibrating frame.

Ninth, the general arrangement, substantially as described, in so far as the same consists of a stationary table on which the paper to be folded is laid, and a vibrating frame, and of sets or series of folding rollers, mounted in that frame, under substantially such an arrangement of folding rollers and blades as is described, whereby the paper is seized from the table and

carried upward by the first pair of folding rollers and delivered from the frame on the opposite side thereof by the last pair of folding rollers.

Tenth, in combination with apparatus for folding paper, a stop motion or disconnecting apparatus, constructed and operating substantially as described.

Eleventh, in combination with folding rollers, a side guide for the edge of a sheet, arranged and acting substantially as specified.

No. 35,739.—LEWIS PATRIC, of Victor, N. Y., assignor to Himself and HENRY REED, of the same place.—*Improvement in Grain Separators.*—Patent dated June 24, 1862.—This invention consists in the employment of a series of inclined screens arranged to revolve within an inclined cylindrical case or barrel, the under side of which opens into a screen box, except a space of a few inches at the lower end where a trough is formed, into which the grain is discharged from the screens, and from which it is thrown into a spout *p* by the joint action of the revolving screens and a scraper attached to the outer screen and revolving with it.

Claim.—The arrangement in grain separators, as and for the purpose specified, of the spout *p* and scraper *c*, in combination with an inclined series of cylindrical concentric revolving screens, having a central blast passing through them longitudinally in the opposite direction from which the grain is fed.

No. 35,740.—G. B. PHILLIPS, of Newark, N. J., assignor to JOHN R. CROCKETT, of the same place.—*Improvement in Wrenches.*—Patent dated June 24, 1862.—This invention consists in the employment of a jamb or holding nut arranged to be screwed against the nut that traverses the sliding jaw, so that when the jaw is adjusted it may be fastened and held in its place by receiving the jamb nut against the nut that traverses the jaw. In the head of the wrench is a socket, which may be made to turn small square-headed bolts, and to this socket is fitted a series of sockets of different sizes adapted to turn screws, with small square heads in cavities or otherwise; screwdrivers, reamers, and other tools may also be fitted to this socket.

Claim.—The jamb or holding nut, arranged substantially as described, for the purpose set forth.

Also, the socket L in the head A, in combination with the removable sockets of various sizes for screwdriver or other tools used in it.

No. 35,741.—CORNELIUS VAN DERZEE, of Albany, N. Y., assignor to Himself and W. S. VALENTINE, of the same place.—*Improvement in Bung Cutters.*—Patent dated June 24, 1862.—This machine is composed of a mandrel provided at one end with a threaded neck for the purpose of screwing it into the driving pulley shaft of a lathe; the other end is fitted to a curved bar B, fitted at its extremities to carry sliding blocks, from which rise ears D with slots in them to guide and carry the cutter bars forming the extremities of the bars. These slots are so arranged as to guide the cutters as they slide through them in lines oblique to the axis of the mandrel so as to give the required bevel to the bungs. The rear end of the cutters are made to enclose a cylinder G fitted to move along the mandrel, and attached also to the rear ends of the cutters are forked guide bars, so that by the movement of the cylinder along the mandrel the cutter bars are forced forwards or drawn backwards through the slotted ears D.

Claim.—The combination and arrangement described of the following apparatus, forming a tool or machine for cutting out from suitable material bungs of any desired size, viz., mandrel A, fitted for rapid revolution, with its bar B, the adjustable sliding blocks C C, fitted as guides to the cutter bar E E, with their cutters and their guide bars K and L, sliding cylinder G, with its groove for the guide bars, the whole as set forth.

No. 35,742.—JAMES WEBSTER, of Birmingham, England, assignor to J. H. PORTER and ROBERT PORTER, of the same place.—*Improvement in the Manufacture of Orygen Gas.*—Patent dated June 24, 1862.—Patented in England October 19, 1861.—This invention consists in a mode of treating a mixture of nitrate of soda or other nitrate with an oxide of iron or burnt oxide of zinc, for the purpose of obtaining oxygen gas, nitrogenous compounds, and the base of the salt employed. For this purpose the mixture is submitted to distillation in an iron or other proper retort, and the nitrogenous compounds contained in the gaseous products of the distillation are condensed in water or in any other convenient manner; those compounds are then separated from the residue of the gaseous products consisting chiefly of oxygen gas, which is collected in a proper receiver. The residuum in the retort at the end of the process contains the base of the salt employed, which, if it be an alkali or alkaline earth, will be in a caustic state.

Claim.—The obtaining the oxygen, nitrogenous compounds, and the base of the salt employed, in the manner stated.

No. 35,743.—B. F. BEAN, of Schuylkill, Pa.—*Improvement in Wagon Standards.*—Patent dated July 1, 1862.—This invention is designed more particularly for wagons for hauling lumber, and consists in the employment of a standard composed of a cast-iron socket, in which a slide is caused to move up and down so that it may be secured at its full height to support the load, and readily lowered to facilitate the operation of loading and unloading.

Claim.—The combination of the socket A, slide B, spring D, and pin E, constructed and adapted to operate together in the manner substantially as and for the purposes specified.

No, 35,744.—C. H. BRADY, of Mount Joy, Pa.—*Improvement in Moulds for Casting Ploughshares.*—Patent dated July 1, 1862.—The chilled-drag or "nowel," which forms a part of the flask, consists of a smooth casting having the face curved and shaped for the reception of the pattern of the mould-board to be cast; it is also provided with a broad flanged edge having three ears which are perforated to receive pins on the cope, which latter corresponds with the drag and pattern, uniting with the same and forming the flask. The flask is secured in a vertical position, and the metal poured in through the runner on the top of the flask.

Claim.—The combination of the flask formed by the chill-drag or nowel B and cope A, arranged substantially in the manner set forth.

Also, casting and chilling plough-irons, in a vertical position, by means of such a flask.

No. 35,745.—D. C. BROWN, of New York, N. Y.—*Improvement in Running Gear of Vehicles.*—Patent dated July 1, 1862.—The object of this invention is to provide a running gear which shall admit of the employment of large forward wheels and be capable of turning short curves; and it consists in dividing the reach and connecting it by a flexible joint. Between the hounds and the rear braces is a sliding box encompassing the divided reach, and provided at its forward end with a finger, and at its upper side with a lever to be under the control of the driver, by means of which the sliding box may be brought into a position so that the rear and forward wheels may be turned simultaneously, or the reach may be made rigid.

Claim.—First, the flexible joint between the sectional reaches A and B, in combination with the sliding box C, substantially as and for the purpose described.

Second, the finger D on the sliding box C in combination with grooves or channels *f* and *g*, substantially as and for the purpose set forth.

No. 35,746.—HENRY BURDEN, of Troy, N. Y.—*Improved Machine for Making Horseshoes.*—Patent dated July 1, 1862.—This invention consists in a method of supporting the outer edge of the shoe during the operation of creasing and punching, by which the iron is prevented from being forced out of shape by the creaser or split during the operation. The position of the creaser is adjusted with reference to the lower dies and side supports by means of a ring having a projection or lug *g* cast upon it and attached to a shaft. Upon this shaft moves a pinion provided with projections extending out on each side of the lug *g*. Set screws pass through the projections and bear against the lug, so that by turning the screws the position of the pinion on the shaft may be accurately adjusted and the crease brought nearer to or removed from the toe of the shoe.

Claim.—First, the peculiar arrangement of four eccentries operating simultaneously in a machine of this kind, by which a horseshoe which has been previously shaped may be punched, creased, and finished without any bulging of the outer surface and without the danger of the shoe being split or cracked, substantially as described.

Second, giving a varying motion to the side supports in said machine, by which to secure a uniformity of motion between the surfaces of those supports and the edges of the shoe with which they respectively come in contact, by means which are substantially set forth.

Third, the mode of adjusting the creasers, as set forth.

No. 35,747.—OTTO ERNST, of New York, N. Y.—*Improved Vessel for Extracting Essences.*—Patent dated July 1, 1862.—Combined with a small boiler, which consists of a conically shaped cup having a trough at the lower end for containing alcohol for heating, is a central perforated pipe which forms a strainer, and in which is fitted a long plug for closing the bottom of the pipe. The alcohol trough rests upon a cup or receptacle into which the extracted coffee, tea, or other article descends after having been subjected to the boiling water in the upper cup, through the perforated pipe.

Claim.—The pipe-shaped strainer *d* applied in the cup or vessel *c* in combination with the vessel *b* and plug or stop to the pipe *d*, in the manner and for the purposes specified.

No. 35,748.—G. P. FARMER, of Philadelphia, Pa.—*Improvement in Machines for Sticking Needles into Paper.*—Patent dated July 1, 1862.—This invention consists of certain mechanism for sticking uniform rows of needles in ridges formed on a continuous strip of paper, the several rows being arranged at uniform distances from each other. The general nature of the devices will be understood from the claim.

Claim.—First, the use of the partitions *i i* in the hopper A for the purpose of separating the needles from each other, arranging them in a row, and determining the number contained in each row.

Second, the hopper A with its partitions *i* in combination with the channels *t t* in the table B, when a lateral motion is imparted to the hopper by the devices described, or their equivalents, for the purpose specified.

Third, the reciprocating rods *k*, adapted to the channels *t t* of the tables B, and arranged in respect to the hopper A and its partitions, and operating substantially as specified.

Fourth, the crimping block L with its projections *a*, the channels *t t* and transverse

grooves *y*, the whole being arranged so as to act on the paper substantially as and for the purpose set forth.

Fifth, the use of a block Q having three or any convenient number of sides, with points *v* at the corners, and having an intermittent revolving motion for the purpose of drawing the paper forward and determining the distance apart of the rows of needles to be stuck into the paper.

Sixth, the plates R arranged on the block Q and operating so as to strip the paper from the points *r*, substantially as specified.

Seventh, providing the hopper A with the rod *w*, or its equivalent, the same being so constructed and arranged in respect to the cross-head E that should the partitions in the hopper fail to direct the needles to their destination, the said rod will at once retard the further movement of the machine.

No. 35,749.—WALTER FITZGERALD, of Salem, Mass.—*Improved Pegging Machine.*—Patent dated July 1, 1862.—In this machine the peg hole is made and the peg driven in the sole by proper instruments actuated by the recoil of springs compressed and liberated at the proper times by rotating cams. The cams which compress the springs are relieved of their pressure by causing the bars which are actuated by the springs to rest on fixed stops after they are elevated sufficiently to compress the springs to the requisite degree, so that, for the remainder of the rotation of the cams, the friction which would be consequent upon the resting of said bars on the cams is avoided, and the machine is caused to run with a less expenditure of power. Provision is made for the peg nearest but not under the driver, which admits of the use of a solid piston to close the open side of the peg-tube through which the peg is passed, instead of using the knife to close the said tube, for the purpose of avoiding breakage of the knife and derangement of the machine.

Claim.—In a pegging mechanism, relieving the rotating cam or cams, which lift the awl bar or driver bar, or both, from the pressure of a compressed spring or springs brought upon said cam or cams, in elevating said bar or bars, during that time of the rotation of said cam or cams in which said bar or bars are required to remain at rest in their highest elevation, by transferring the contact and pressure of said bar or bars from said cam or cams to a stop or stops, from which said bar or bars can be detached at the proper times, substantially as specified.

Also, the combining the piston *p* and spring *r*, so that the peg or pegs displaced by the piston in its movement to close the peg-tube shall be replaced by the spring in the peg-tube when the piston moves to open the tube.

Also, combining the piston *p* and spring *r* and a stationary knife, so that the movement of the piston shall sever a peg from the peg-wood by forcing the wood upon the knife, and so that the spring shall return the wood, and the peg severed therefrom, to their normal positions upon withdrawal of the piston.

Also, in combination with the sliding and oscillating head of a pegging machine, the arrangement, substantially as described, of the driving shaft *i*, by which it is kept in one place while its distance from the centre of the driven shaft remains unaltered in the different positions which the head assumes in pegging, and by which I am enabled to connect the shafts *i* and *g* by spur gearing.

No. 35,750.—D. FLOWER, of Geneva, N. Y.—*Improvement in Trimming Wall Paper.*—Patent dated July 1, 1862.—The nature and object of this invention will be understood from the claim and engraving.

Claim.—The shaft C having feed rollers *h h*, the extremities of said shaft resting in concentric arms D D and held down by springs *k k*, so that the rollers may be raised for inserting the edge of the untrimmed paper under them, and without throwing the wheel and pinion out of gear, substantially as set forth.

Also, the elastic band L, running closely to or in contact with the surface of the table, in combination with the feed rollers *h* and *m*, situated at such a distance apart as is sufficient to hold the paper securely in place while it is being trimmed, substantially as described.

Also, placing the shaft H obliquely to the shaft C and to the direction of feed, for the purpose of throwing the heel of the cutter away from the edge of the trimmed paper, so as not to interfere with it, arranged substantially as set forth.

Also, the cleft rod P for seizing and holding the end of the trimmed paper, and rolling it as it is delivered from the feed rollers *h m*, arranged in such a manner that the increasing size of the roll shall not take up the paper faster than it is delivered from said rollers, substantially as described.

No. 35,751.—HENRY GREEN, of Antwerp, N. Y.—*Improved Metallic Heels for Boots and Shoes.*—Patent dated July 1, 1862.—The upper part A of the metallic heel is a shell of the form of the back part of the boot or shoe, and the lower part of A is provided with a shoulder which forms a flanch over which the leather extends. The lower part B of the heel is also a shell cast in the form of the ordinary heel, the upper edge of the front part fitting in a crease or recess in the back part of the shank, and the upper part of B fitting over the leather which extends down on the flanch of the upper part A. The part A is secured to the part B by screws so as to admit of its ready detachment.

Claim.—The combination of the parts A B, provided with the shank piece and counter piece, and constructed with the flanch and angles for clamping the leather, all substantially as and for the purpose specified.

No. 35,752.—LUDWIG HAECKER, of Altenburg, Hungary.—*Improvement in Brewing, when Indian corn is used.*—Patent dated July 1, 1862.—For a description of the process claimed, reference must be had to the specification.

Claim.—Not broadly the employment or use of maize for brewing beer, but the described process of producing maize beers by treating maize mixed with barley or malt about in the proportion and substantially in the manner set forth.

No. 35,753.—E. E. HENDRICK, of New York, N. Y.—*Improved Lubricating Composition.*—Patent dated July 1, 1862.—The nature of this invention is explained by the claim.

Claim.—As a lubricator for machinery, a fluid or compound, the bulk or excess of which is composed of coal oil produced in a state of nature, and with which caoutchouc is combined.

No. 35,754.—E. E. HENDRICK, of New York, N. Y.—*Improved Lubricating Composition for Machinery.*—Patent dated July 1, 1862.—One ounce more or less of caoutchouc is dissolved in a gallon of coal or rock oil, and to this solution is added an equal quantity of water, the whole forming a mucilaginous compound.

Claim.—The use of a solution of caoutchouc in connexion with coal oil and water, substantially in the manner and for the purpose set forth.

No. 35,755.—JAMES HAMBLET, jr., of Boston, Mass.—*Improvement in Watch Clocks.*—Patent dated July 1, 1862.—This invention consists in the employment of an electro-magnetic system of wires in connexion with a clock, registering apparatus and batteries, which are placed in the counting-house or office to which the watchman has no access, the conducting wires being carried to each apartment or place that is to be visited, at each of which there is a suitable knob or key for closing the circuit at the time and in the order required.

Claim.—The successive electrical connexion of each wire of a series or groups of wires, in such manner that but one conducting wire, leading to one apartment or place, can be used at one time, while the action of the whole series makes one full or complete record of the entire rounds of the watchman, as set forth.

Also, the combined action of the traversing connecting arm 20 and the pencil or marker, by which a record is produced that shows the time when the electrical connexion was made, and the interval between each successive connexion, as set forth.

Also, the series of revolving cams, or their equivalents, when their motion is controlled or regulated by the combined action of an electro-magnet and the connecting arm 20, substantially as described.

No. 35,756.—GEORGE HEATH, of Little Falls, N. Y.—*Improvement in Valves or Wickets for Canal-lock Gates.*—Patent dated July 1, 1862.—This invention relates to a method of constructing the valve or wicket, which is made of wood and metal combined, so as to effectually prevent its springing or warping. The valve or wicket is arranged in relation to the position of its axis with its ends, and also as regards the formation of the latter, whereby the pressure of the water is made available in keeping the valve or wicket closed, and also in assisting to open it when started from its seat. The invention relates also to an improvement in the seats of the valve or wicket, whereby the same is rendered water-tight when closed, and a firm and substantial bearing obtained.

Claim.—Having the ends of the valves B provided with heads D that have hollow journals C projecting therefrom, and openings *c* for the entrance of tenons *b* in combination with the central shaft E, substantially as and for the purpose shown and described.

Also, the combination of the bevelled bars F F on the edges of the valves with the V-shaped grooves *g g* in the heads D D, in the manner and for the purpose shown and described.

Also, the arrangement of the bevelled edges of the valves and cleats G G with the central axis, in the manner substantially as shown and described, so that the valves, although having their axes in the centre, will present the greatest area for the pressure of the water above their axes, all as set forth.

No. 35,757.—J. HUBLER and R. M. MCGRATH, of Lafayette, Ind.—*Improvement in Corn Shellers and Cleaners.*—Patent dated July 1, 1862.—This invention is designed as an improvement upon a machine patented to Richards, Hubler & McGrath, assignees of J. C. Richards, September 25, 1860, and consists in having the screen cylinder longer than the rod cylinder or sheller, so that the corn [illegible] shelled at the rear end of the sheller can receive a strong blast of wind and be freed from chaff and [illegible] before it reaches the rear end of the cleaner.

Claim.—Wherein a rod cylinder and toothed shaft and screen cylinder are used substantially as covered by the patent to Richards, Hubler & McGrath, of the 25th of September, 1860, making the sheller shorter than the cleaner, or, in other words, in having the screen cylinder or cleaner longer than the rod cylinder or sheller, as set forth.

No. 35,758.—E. J. HYDE, of Philadelphia, Pa.—*Improvement in Coffee Roasters.*—Patent dated July 1, 1862.—This invention consists in arranging a crane and coffee cylinder so that

the latter can revolve on the crane while the roasting process is being performed, and so that the crane can swing with the cylinder out of the stove to discharge the roasted coffee and receive a fresh supply. The fixed part of the drum of the stove is constructed with one of its end pieces wide and the other narrow, and the adjustable section of the drum in a similar manner, but in a converse order to that of the end pieces first mentioned, so that the crane with the coffee roasting cylinder may be swung out at right angles to the front of the stove, and the ends of the drum be perfectly closed in when the coffee cylinder and the adjustable section of the drum are adjusted for the roasting process. A damper is so arranged that the flame may be passed either directly off to the flue or nearly around the coffee cylinder before it reaches the flue during the process of roasting.

Claim.—First, so combining a stove, a crane, and a roaster, that the roaster may be revolved upon the crane over the fire, swung out horizontally from the stove to an angular position therewith, and in this position be turned upon the crane to empty its contents, as set forth.

Second, the combination, substantially as described, of the crane, E′ and roaster F, for the purpose set forth.

Third, the manner, substantially as described, of constructing the end portions of the stove A in combination with the manner of constructing the end portions of the adjustable door E, for the purpose set forth.

Fourth, the arrangement of the damper H in combination with a removable roaster F, for the purpose set forth.

No. 35,759.—HENRIETTA C. INGERSOLL, of Bangor, Maine.—*Improved Broom.*—Patent dated July 1, 1862.—This invention consists in placing a sponge for holding a quantity of water within a corn broom, in such a manner that during the operation of sweeping, the broom is gradually supplied with moisture from the sponge for the purpose of preventing the dust from rising in the room.

Claim.—The application of a sponge C, or its equivalent, to a corn broom A, substantially as and for the purpose specified.

No. 35,760.—JAMES JENKINSON, of Brooklyn, N. Y.—*Improvement in Sliding Bayonet.*—Patent dated July 1, 1862.—This invention relates to a sliding bayonet, so constructed and applied as to admit of its being readily advanced in the act of lowering the piece to "charge bayonet," and readily retracted in the act of restoring the piece to a vertical position. The bayonet is held in its advanced position by means of a spring catch.

Claim.—The combination of the cavity C, sliding bayonet D, shank E, handle F, spring catch G H I, and hole *e*, all constructed, arranged, and employed in the manner and for the purposes shown and explained.

No. 35,761.—T. D. JUDAH, of Sacramento, Cal.—*Improved Spring-back Chair.*—Patent dated July 1, 1862.—Attached to the back of the chair frame, and extending above and below the seat, are springs, which admit of the upper part of the chair frame yielding to the pressure of the body leaning against it, the chair back being jointed near its seat.

Claim.—The use of flat springs to the back of chairs, when said springs are in the back, above the seat, over a joint or joints of the chair frame, substantially as and for the purpose described.

No. 35,762.—WILLIAM KEARNEY, of Union Township, and FRANCIS KEARNEY, of Newark, N. J.—*Improvement in Pipe Tongs.*—Patent dated July 1, 1862.—The object of this invention is to obtain a means for readily adjusting the sliding jaw relatively with the fixed jaw, so that the wrench may be adjusted to suit pipes or tubes of different sizes, and at the same time be capable of being firmly secured in position, so that it cannot be casually moved when the wrench is applied to its work.

Claim.—The collar C, with the leg E′ attached, in combination with the wedge D, thumb screw E, and inclined part *a* of the leg A, all arranged as and for the purpose set forth.

No. 35,763.—J. P. KROWLES, of Lockport, N. Y., assignor to Himself and H. F. WARREN, of South Pekin, N. Y.—*Improved Spring Bed Bottom.*—Patent dated July 1, 1862.—The upper surface of the bed bottom is composed of the ordinary longitudinal slats, under which are placed longitudinal strips. At the head of the bed bottom these strips are connected by a cross cleat, between which and the cleat of the slats are a suitable number of coiled springs. The ends of the strips converge with the slats at the foot of the bed bottom to the cleat of which they are, respectively, secured by screw bolts passing through both, and by which they may be separated to a greater or less extent. Between the slats and strips at the lower end are two sliding and adjustable blocks, extending from the centre strip to the outside one, so that by sliding them forward or back at an angle, the sides may be adjusted to a greater or less stiffness, and thus adapted to two persons of unequal weight in the same bed.

Claim.—The elastic strips C C C, in combination with the slats A A A, coiled springs E E E, and adjusting blocks H H, the whole arranged and operating substantially as set forth.

In combination with the above, the screw bolts G G, for adjusting the ends of the slats and strips, arranged substantially as specified.

No. 35,764.—J. W. KELLEY, of Ypsilanti, Mich.—*Improvement in Seeding Machines.*—Patent dated July 1, 1862.—This invention consists in the employment of a rotary agitator or distributor, in connexion with an adjustable gate, arranged in such a manner that a greater or less quantity of seed may be sown on a given area. The back parts of the bars which form the draw-bar for the hollow tooth are bent in the form of a loop for the upper part of the tooth to fit into, the upper end of the said tooth being provided at its back part with a projection fitting into a hole at the back part of the draw-bar. To the upper part of the tooth, at its front side, is attached a segmental projection provided with a cross-piece at its upper and lower ends, which serve as stops, to prevent the tooth from being forced beyond a certain distance below, or raised beyond a certain point upwards.

Claim.—First, the horizontal rotating seed distributor G, when provided with flanches *b*, and placed in a cylindrical box F below, and communicating with the box D, and used in combination with the slide P, arranged to work over the discharge opening *c* of the box F, as and for the purpose set forth.

Second, the arrangement of the loop *a** at the back part of the draw-bar T, projection *k*, and segmental flanch *m*, attached to the tooth U, and fitted in the loop *a**, all arranged as shown, to admit of the tooth being secured to the draw-bar and the former working therein, as and for the purpose set forth.

No. 35,765.—AUGUST KOCH, of Rocktown, Pa.—*Improved Self-acting Drawbridge.*—Patent dated July 1, 1862.—The nature of this invention will be understood from the claim.

Claim.—The right and left-handed action of the screw with three threads, more or less, with sufficient pitch to allow the weight to run it back when it is opened, and also the cylinders fitting one in the other, to keep the screw at its place and giving strength to the same.

Also, the opening by a rudder in the water acting as a spring, to take off the shock of the boat striking the bumper, as described, or anything else, substantially the same, and which will produce the intended effect.

No. 35,766.—F. C. LIGHTE, of New York, N. Y.—*Improvement in Piano-fortes.*—Patent dated July 1, 1862.—This invention relates to the employment in piano-fortes of what are termed string clamps, for clamping the string at the points, between which it should vibrate, and preventing any vibration in the portions beyond those points.

Claim.—So applying the clamping screw *c* that it not only serves to attach the upper or outer portion E of the clamp to the bridge D or wrest plank B, but by screwing into the lower portion F of the clamp serves to produce a positive and independent action of the two portions of the clamp upon the string, substantially as specified.

No. 35,767.—M. M. LIVINGSTON, of Brooklyn, N. Y.—*Improved Mode of Applying Netting to Windows.*—Patent dated July 1, 1862.—This invention consists in the employment of elastic bands secured in the sides of the netting, for the purpose of contracting the fabric which forms the screw when the window sash is lowered, or adjusting it to the opening of the sash when raised to any desired height. The fabric is secured to two rods, which are held in place by screw rings or hooks driven into the sash, so that the rods and fabric can be readily removed.

Claim.—The application of the fabric C provided with elastic cords or bands *e*, or an equivalent thereof, passing through its sides to the casing and frame of a window, in combination with the rods *a a′*, and rings or hooks *b b′* or their equivalents, arranged and operating substantially as and for the purpose set forth.

No. 35,768.—DAVID MATTHEW, of Philadelphia, Pa.—*Improvement in Steam Boilers.*—Patent dated July 1, 1862.—Extending from the flue sheet, just below the flues, is a curved partition rising gradually upwards towards the back part of the furnace, and terminating somewhat above the door, through which fuel is supplied to the furnace, at such a distance from the rear wall of the fire-box as to leave but a sufficient open space or channel through which the gases and heated air pass upwards along the rear wall of the furnace.

Claim.—The special combination with the fire-box *d* of the partition *f*, as constructed and arranged in relation to said fire-box, for the purpose set forth.

No. 35,769.—S. T. MCDOUGALL, of Brooklyn, N. Y.—*Improvement in Gas Stoves.*—Patent dated July 1, 1862.—The burner, which is of the usual conical shape, has its top turned over and downward, so as to receive a cone-shaped cap which is fitted thereto, the perforated plate being secured between the cap and the top of the cylinder, so that the flame is raised from off the plate, and the latter is thus preserved in a great degree from injury by heat.

Claim.—First, the burner J, having a contracted top Q, with tight joints between the sides of the burner and the circumference of the perforated plate O′, when used for heating purposes, substantially as specified.

Second, the above-described burner, or its equivalent, in combination with a gas stove composed of the base A, cylinder B, breast C, and top D, substantially as described.

No. 25,770.—S. T. McDougall, of Brooklyn, N. Y.—*Improved Washing Machine.*—Patent dated July 1, 1862.—This invention consists in the employment of a revolving hollow cylinder arranged in a suitable tub, and combined with a reciprocating frame, which, with the cylinder, is provided with a ribbed or corrugated surface. Upon the cylinder and frame is placed a series of ribs or slats having grooves formed between them, and in the spaces between the slats are rows of balls arranged so as to turn freely thereon upon pins. The inside of the cylinder is also constructed with balls, slats, and corrugations. To the frame is secured a hopper, which serves to feed soap or other cleansing material to the clothes by the joint operation of the frame and cylinder.

Claim.—First, the revolving cylinder and reciprocating frame, both having ribbed surfaces, and arranged and operating in combination, substantially as described.

Second, constructing the surfaces of such cylinder and frame of grooved slats combined with rows of balls, when the latter are arranged with respect to each other, substantially as and for the purposes set forth.

Third, constructing the inside of the cylinder with similar friction surfaces, in combination with the series of balls, or their equivalent, on the central shaft, substantially as specified.

Fourth, the hopper, as attached to and used in combination with the washboard or frame M, in the manner and for the purpose set forth.

No. 35,771.—J. W. McGaffey, of Chicago, Ill.—*Improvement in Seed Planters.*—Patent dated July 1, 1862.—Upon the shaft which carries the driving wheels is secured a disk wheel, which is pressed by means of a lever against the periphery of a friction wheel composed of an elastic ring of rubber or other suitable material. As the friction wheel is moved to or from the axle of the friction disk, the relative motion of the seed-distributing cylinders to the driving wheels is more or less changed, thus permitting the seed to be dropped in hills at any desired distance apart. In the seed-distributing cylinder are two holes drilled opposite to each other, and into these holes are plugs, which may be turned in or out to adjust the depth of the cavities. The shanks of the plugs screw into a movable slide *a*, upon which are projecting points *c c*, which come in contact with a cross-bar on the seed boxes; as the cylinders revolve, the slide *a* is forced down, so that the lower plug is brought to a level with the periphery of the cylinder, and insures the dislodgement of any grains that might stick in the cavity. The frame is made in two parts, hinged together by collars at the rear part, working upon sleeve boxes on the front part of the frame.

Claim.—First, the combination with a corn-planting machine of the disk S and friction wheel T, arranged and operating substantially in the manner and for the purpose set forth.

Second, the combination of the cylinder H, shifting plugs *e e*, and slide *a*, with projecting pins *c c*, and cross-bar X, constructed and operated as specified.

Third, the combination of the flexible frame A A, the adjustable gear and its connexions, with the compound seed-distributing cylinders H, arranged and operated substantially as shown and described, for the purpose specified.

No. 35,772.—Benjamin Merritt and F. M. Gibson, of Chelsea, Mass.—*Improved Mechanism for Operating Ships' Windlasses.*—Patent dated July 1, 1862.—The windlass is supported upon two standards. A worm gear encompasses the central part of the windlass and meshes into a vertical screw, through which passes a square shaft surmounted by a capstan. This shaft is pivoted at its lower end to the deck, a screw being formed on the shaft just above the deck, upon which screw is secured a cup or shoe which serves to support a spring or cylindrical block of India-rubber extending around the shaft, and entering a socket formed in the lower part of a cylinder *d*, which extends down from the screw and is of a larger diameter than the spring or its supporting cup, so as to prevent oil from gaining access to the rubber spring.

Claim.—Improved windlass motor or operative mechanism consisting of the screw D, the worm gear C, the separate shaft E, and the elastic screw supporter H, arranged and applied together and to the windlass, or to the latter and a capstan, in manner and so as to operate substantially as specified.

Also, the described arrangement of the external cylindrical surfaces of the spring-socket cylinder *d* and the adjustable cup *b*, the said arrangement being for the purpose specified.

No. 35,773.—A. B. Morey and William Scarlett, of Aurora, Ill.—*Improved Machine for Dressing Feathers.*—Patent dated July 1, 1862.—This invention consists in a means of subjecting feathers to violent agitation over a strainer or perforated surface, under the influence of a current of air passing downward through the strainer, the operation being made continuous by the gradual feeding in and withdrawal of the material. Means are also employed for transferring the feathers from a bed and supplying them to the working part of the machine.

Claim.—First, the described combination of a continuous feeder to supply the feathers from a suitable hopper, a fan, or equivalent blower, a series of agitators acting within an enclosed case or spout, and a perforated bottom or screen, for the purpose set forth.

Second, the employment on a feather-renovating machine of the movable hopper N hinged at P, as represented, and adapted to be let down and to rest upon the surface J, or its equiva

lent, to facilitate the filling of the same, and to be sustained in the erect or elevated position to feed the feathers to the machine, as set forth.

No. 35,774.—John Myers, of Dallastown, Pa.—*Improvement in Windmills.*—Patent dated July 1, 1862.—The wind wheel is provided with an annular rim that is secured to the outer ends of the wings and forms a belt wheel, from which, motion is imparted to the saw spindle or other device, and is combined with a hinged rotary post in such a manner that, by raising and turning the said post to the wind, the wind wheel is brought in working position, and at the same time the belt is stretched. When the wind wheel is not to be used it can be conveniently turned down, so as to relieve the belt and stop the motion of the machine. A secondary flanged wind wheel is attached to a transversely sliding adjustable arm, and combined with the belt running from the main wheel to the saw spindle in such a manner as to obtain an additional power, and at the same time the tension of the driving belt can be regulated at pleasure.

Claim.—First, the arrangement of hinged rotary post D and windlass *f*, in combination with belt E running over the annular rim B of the wind wheel A, constructed and operating substantially in the manner and for the purpose shown and described.

Second, the arrangement of the secondary wind wheel G and transversely sliding-adjustable arm *m*, in combination with the belt E and wind wheel A, constructed and operating substantially in the manner and for the purpose specified.

No. 35,775.—H. W. Oliver, of New Haven, Conn.—*Improvement in Machines for Making Gun Stocks.*—Patent dated July 1, 1862.—This machine is composed of a rotating holder for containing the gun stock, and having attached to it a series of patterns corresponding with the mortises and other cavities to be cut in the stock for letting in the metal work, combined with a reciprocating carriage for moving the said holder lengthwise, and with a rotating cutter and tracer, in such a manner that all the said mortises or cavities may be cut without removing the stock as is usual, by which a perfect uniformity in the stock is secured.

Claim.—A machine for cutting the recesses or mortises for letting in the metal work of gun stocks, composed of a rotary stock holder G and attached patterns *f g h i' i' k' k' n'* and *o'* fitted to bearings in a reciprocating carriage C, substantially as described, and combined with a rotating cutter *y* and tracer *t*, to operate substantially as specified.

No. 35,776.—Morris Opper, of New York, N. Y.—*Improvement in Skeleton Skirts.*—Patent dated July 1, 1862.—The nature of this invention will be understood on reference to the claim and engraving.

Claim.—First, attaching the hoops to the tapes in a skeleton skirt by means of clasps, which extend through one or more holes in the tapes and pass around portions of such tapes, while they are secured to the hoops by other parts of the clasp, substantially as set forth.

Second, the specific construction of the clasp A B C, consisting of the lips A, adapted to fold over the hoop in the manner shown, and the lips B, adapted to be inserted through the tape and to fold over the part C on the opposite side of the tape, in the manner shown for the purpose set forth.

No. 35,777.—J. S. Ostrander, of Albany, N. Y.—*Improved Drinking Cup.*—Patent dated July 1, 1862.—The cup is divided into three sections, to the upper one of which is hinged a handle, which is confined when closed by a catch at the bottom of the lower section inside. When the sections are drawn out the handle is turned over, and its lower end is brought under a catch at the bottom of the lower section outside.

Claim.—The handle and catch on the inside, and the catch for the outside, arranged substantially as and for the purpose specified.

No. 35,778.—Harrison Parker and Jonathan C. Sleeper, of Boston, Mass.—*Improvement in Machinery for Cutting Veneers.*—Patent dated July 1, 1862.—The inventor says: "The main feature of this invention is the peculiar method of applying the pressure to the surface of the block at or near the line of cut, and of graduating the same to the different thicknesses of veneers; also the method of feeding the knife and of graduating the feed to the different thicknesses of veneers to be cut;" by which it is claimed that veneers may be cut perfectly sound and free from cracks, from any kind of wood and to any thickness required.

Claim.—First, the pressure bar *d*, adjusted as described, in combination with the feed screws U U for holding the pressure when used for cutting veneers, operated by the mechanism in the manner and for the purpose specified.

Second, the double ratchet, constructed and operated as described, for the purpose specified.

Third, the cam lever *l* in combination with the adjustable slide block *p* thereon, substantially in the manner and for the purpose described.

Fourth, the combined arrangement specified for giving a back and forward self-feeding movement to the knife, whereby the knife recedes from the block or wood for the return motion, and is again fed forward for the cut, substantially as described.

No. 35,779.—S. S. PUTMAN, of Dorchester, Mass.—*Improved Curtain Fixture.*—Patent dated July 1, 1862.—This invention consists in placing the friction bearing, by which the curtain is supported, at any desired height within the roll itself or its cap, so as to obviate the necessity of any nice or exact adjustment, instead of the usual method of producing friction by a spring pressing the end of the roll or its journal against one of the brackets or supports.

Claim.—The described curtain fixture, in which the friction necessary for holding the weight of the curtain is produced between the roll B, or its spool or cap, and the friction shaft D, which is held from revolving, substantially as set forth.

No. 35,780.—WILLIAM RIDER, of Almont, Mich.—*Improvement in Horse Power.*—Patent dated July 1, 1862.—This invention consists in a novel arrangement of gearing and shafts, by which it is designed to diminish friction and consequent unnecessary consumption of power, and also admit of power being communicated from it at different points.

Claim.—The combination of the central shaft G and its gear F H with the wheels I I J J and the master wheel K, as shown and described.

Also, having the master wheel K supported upon a central tube B, in the manner shown and described.

Also, the combination of the tube N and driving shaft O with the tube B and shaft G, as and for the purpose shown and described.

No. 35,781.—A. J. RITTER, of Rahway, N. J.—*Improved Writing Desk.*—Patent dated July 1, 1862.—A box or case of a portfolio or box form is provided with covers or lids hinged at opposite ends, and fastened in such a manner that when the lids are opened and supported at a certain elevation, it forms a portable writing desk.

Claim.—The combination of the partitioned box or frame A, lids or covers D and E, and rests or supporting boards F and G, for the purpose of producing a portable writing desk, portfolio, work-box, and checker-board, substantially in the manner set forth.

No. 35,782.—JOHN SEHO, of Wilmington, Del.—*Improvement in Hospital Bedsteads.*—Patent dated July 1, 1862.—To a bedstead of ordinary construction is applied a frame which is covered with a fine canvas provided with an opening near the centre, and capable of yielding to the pressure of the body. To each corner of the frame are attached cords passing through grooves in the post and over pulleys to a roller below, so that the patient may be raised at any time and allow the bed to be made up. To the foot posts is attached a light table composed of a thin piece of wood which may be used as a table or fan.

Claim.—Not raising the patient by the cords and pulleys, but the construction of hospital bedsteads with grooved posts, with pulleys set therein as described, for the purpose of setting the cords out of the way of attendants.

Also, the application of the fan table *p* to such bedsteads, in the manner and for the purposes specified.

No. 35,783.—E. D. SEELEY, of Brookline, Mass.—*Improvement in Cap-Priming Attachment to Fire-arms.*—Patent dated July 1, 1862.—This invention consists in applying to guns or other fire-arms the cap holder and primer patented to the said Seeley, October 29, 1861, and so modifying the discharging end of the holder that it may be moved toward and turned over the nipple of the fire-arm so as to place a cap upon the nipple, and then return to its original position automatically.

Claim.—First, the combination of a cap holder and primer, which has an extensible case, and a gun or other nippled fire-arm, substantially as and for the purpose set forth.

Second, the construction of the extensible case A in two parts *a b*, and with spring-connecting bands *e e*, or other equivalent connexions, substantially as and for the purpose set forth.

No. 35,784.—MOSES SHELDEN, Jr., of Calais, Vt.—*Improvement in Harrows.*—Patent dated July 1, 1862.—This harrow is composed of two concentric rings, secured together and provided with teeth.

Claim.—The arrangement of the teeth of a harrow in concentric series, in the manner shown by E and G, (with or without the straight series H extending across the centre,) for the purposes set forth.

No. 35,785.—A. E. SMITH, of Bronxville, N. Y.—*Improvement in Attaching Thills to Axles.*—Patent dated July 1, 1862.—This invention consists in forging the jack or eye, to which the thills are attached, upon the front edge of the axle, instead of the usual method of making the jack or eye form a separate piece of metal and securing it upon the axle.

The hole through the jack is made larger in diameter than the bolt, so as to hold a hollow cylindrical packing of rubber, and combined therewith is a square bolt to attach the thill to the jack, which being held firmly from rotating in the ear-pieces of the thill iron, transfers the friction and wear upon them to the packing, and thus prevents the wear of the bolts and holes, and also prevents the bolts from losing their nuts.

Claim.—First, the method of constructing iron or steel axletrees of wagons, and other vehicles with a drawn-out or solidly-welded jack or eye on the front edge thereof, for attaching the thills thereto, substantially as set forth.

Second, also the use of a square bolt, and openings in the ear pieces of the thill irons, to hold the bolt from turning on its own axis, in combination with the packing and jack, for the purposes described, and made and operating substantially as set forth.

No. 35,786.—O. P. SMITH, of New York, N. Y.—*For Pen Rack.*—Patent dated July 1, 1862.—To the upper part of a standard or post attached to a stand is secured a circular disk of India-rubber, in the edges of which are notches of sufficient size to receive and hold a pen-holder or pencil.

Claim.—The application of a notched flange or strip of India-rubber, gutta-percha, or elastic material as a pen rack, in all and every form in which the same may be applied, the elasticity of the material firmly grasping the pen or pencil, so that when any one may be taken from the rack all others remain fast in their positions.

No. 35,787.—A. SPENCER, of Grampian Hills, Pa.—*Improvement in Cider Mills.*—Patent dated July 1, 1862.—Upon a horizontal shaft are fitted loosely two circular plates placed obliquely to each other and connected by a pin, and having their lower edges in contact with each other. These plates bear against friction rollers at their lower edges, fitted in a frame, the lower part of which bears against a spring.

Claim.—The combination, in the manner shown and described, of the disks E G and shafts F B with the roller *d*, frame H, and spring I, all as set forth.

No. 35,788.—F. B. STEVENS, of New York, N. Y.—*Improvement in Valves for Heating Feed Water for Steam Engines.*—Patent dated July 1, 1862; patented in England October 10, 1861.—The nature and object of this invention will be understood from the claim.

Claim.—First, the additional eduction valve openings 6 7 8 10 and 11, formed by narrow ports in a slide valve, and arranged to be wide open when this valve is midway in its throw, substantially as shown and described, but not these ports otherwise than in combination with heating the feed water of a steam-engine by steam withdrawn from the induction side of the piston through an aperture made in the centre of the length of the cylinder.

Second, in the same connexion and combination forming these additional eduction ports on the two sides of a three ported valve.

Third, in the same connexion and combination, using the pressure of steam from the boiler to keep the additional eduction slide valve on its seat.

No. 35,789.—F. B. STEVENS, of New York, N. Y.—*Improvement in Heating Feed Water for Steam Boilers.*—Patent dated July 1, 1862; patented in England October 10, 1861.—The object of this invention is to improve the action of the valves by the application of devices to open and close them in the period commencing after the steam has been cut off, and ending at a sufficient time before the piston gets to the end of its stroke to allow for a proper degree of lead to be given to the main eduction valves. The valves are held on their seats when the pressure in the heater is greater than the pressure in the cylinder by balancing the valves and weighing them. An injection pump to deliver the cold water into the closed heater is used in combination with the withdrawing pump to remove it, the action being more certain and reliable than when the water is drawn into the heater by the vacuum therein. This injection pump is prevented from delivering more than its capacity at each stroke by weighting its delivery valve or by a weighted check valve placed between the pump and the heater. Use is made of a pump with a hollow plunger, the valve or bucket being placed in the plunger and the water delivered through it, the end of the plunger outside of the pump having an additional packing where it enters the pipe leading to the boiler, so that the air will be withdrawn from the heater and the packing rendered as accessible as in the ordinary feed pump.

Claim.—First, the additional eduction valves, as shown and described, closing when the piston is at a sufficient distance from the end of its stroke to allow the main eduction valve to open with lead.

Second, the combination of the additional eduction valves, the closed heater and the injection and withdrawing pumps, substantially as shown and described.

Third, the arrangement and combination of the two pumps, differing in capacities, as described.

Fourth, the weighted check valve, or its equivalent, placed between the injection pump and heater.

Fifth, the plunger pump having a valve placed in the hollow plunger, and having the plunger packed by two stuffing boxes, one at the top of the pump, and the other at the entrance of the pipe or chamber.

All these claims only in connexion and combination with heating the feed water by steam withdrawn from the induction side of the piston.

No. 35,790.—J. A. TAPELY, of Somerville, Mass.—*Improvement in Hand Sawing Machines.*—Patent dated July 1, 1862.—This invention consists in arranging the saw to cut with or in the direction of the grain of the wood, and thus using the saw to feed forward the stuff being cut, in combination with a check roll and its gearing, which prevents the stuff from being dragged upon the saw so fast as to choke it.

Claim.—The saw D having its teeth constructed as represented, and arranged with its axis below the table, so as to cut with the grain of the wood, and thus draw forward the material being cut, in combination with the toothed wheel *k* and its operating mechanism, which will by their positive regular feeding action prevent the saw from being choked by its own tendency to draw the material forward, in the manner and substantially as specified.

No. 35,791.—J. W. VALENTINE, of Sparta, Ill.—*Improvement in Beehives.*—Patent dated July 1, 1862.—The hive is made to rest upon four pins secured to a bench. Upon these pins are placed inverted glass bulbs for the purpose of preventing moths from getting up into the hive.

Claim.—The arrangement of the pins *d d* and glass bulbs *c c* in combination with the lower part of the hive, and with the bench B, in the manner described and for the purpose specified.

No. 35,792.—WILLIAM VAN ANDEN, of Poughkeepsie, N. Y.—*Improvement in Harvesters.*—Patent dated July 1, 1862.—This invention consists in the method of constructing a compound or double-acting coupling box in combination with the driving wheels and gearing of the machine, so that each driving wheel may act independently of the other to operate the gearing, and thus permit the machine to be worked to the right or left to cut the grass. The eye on the cutter bar is formed by bending a portion of it in the shape of an inverted U, so as to cause the connecting rod for operating, to work directly upon the bar and thereby avoid the expense and labor of bolting an eye to it. The propelling wheel axle is held upon the vibratory frame by means of self-adjustable boxes working in guides, so that the frame may have a rocking motion on the trunnions, but be prevented from having a sideway motion.

Claim.—First, the combination of the gear wheel G with the bearing *f 2*, forming an extension of the box F as a method of suspending the said gear wheel G upon the frame, so as to permit it to vibrate with the rocking motion of the frame, in contradistinction to the usual method of suspending the main gear wheel directly upon the axle A, thereby causing it to conform to the motion of the axle, instead of conforming to the rocking or vibratory motions of the other gear wheels suspended on the frame, to cause an easy and comparatively speaking frictionless motion in all the gearing wheels for operating the cutters.

Second, the use of the compound coupling box, substantially as described, in combination with the propelling wheel B2 and gear wheel G, for the purposes set forth.

Third, the use of the guide boxes K in combination with the axle A and frame C, substantially as set forth and for the purpose described.

Fourth, the method of making the inverted U-shaped eye in the end of the cutter bar, in combination with the plate *r 2*, substantially as described and for the purposes set forth.

No. 35,793.—J. M. WALLIS, of Milton, Iowa.—*Improvement in Portable Fences.*—Patent dated July 1, 1862.—This invention consists in giving to the upright posts or standards to which the longitudinal rails are secured, alternately an inclination in opposite directions, so that each panel presents a warped surface, and that when the tops of the several uprights are brought in line, their lower ends form a zig-zag line for the purpose of increasing the stability and firmness of the fence.

Claim.—Giving to the upright posts or standards A, which support the longitudinal rails B, alternately an inclination in opposite directions, substantially as and for the purpose specified.

Also, the arrangement of the braces *b*, projecting alternately in opposite directions from the inclined posts *a*, in combination with the rails B′ B″, having their ends inserted side by side between the posts *a*, as described, thereby forming a tie and producing a firm fence with only one brace on each standard.

No. 35,794.—ANSON WARREN and J. W. MARTIN, of Maquoketa, Iowa.—*Improvement in Water Elevators.*—Patent dated July 1, 1862.—This invention consists in an arrangement of parts whereby the buckets are held at the necessary distance apart, and turned into a correct position for discharging. The cord is attached to each bucket by a swivel at the extremity of a horizontal arm projecting from the top of a flat link hinged to the bucket. Attached to the upper part of the frame are spiral bow-shaped guides for the purpose of turning the ascending bucket to the right position for discharging. Cross-beams secured to the frame are so placed as to depress the inner margin of the bucket, and thus cause the spout of the bucket to project over the spout in the curb.

Claim.—First, the relative arrangement of the winding pulley C and wheels D D′ constructed as described, and operating in connexion with the cord N, guides K K′ and buckets E E′, in the manner and for the purposes specified.

Second, the combination of the spiral bow-shaped guides K K′, swivel H, horizontal arms I, and flat links J, all constructed, arranged, and operating in the manner and for the purposes set forth.

Third, the combination of the cross-beams L M, automatic valve F G, hinged links J, and spout *e*, operating in the manner explained to first tilt the bucket, and afterwards discharge the water through the spout *a*, or *a′*.

No. 35,795.—ROBERT WEIR, of Philadelphia, Pa.—*Improvement in Projectiles.*—Patent dated July 1, 1862.—This projectile is composed of an elongated and pointed head and a stem at the rear of the same, the said stem being composed of alternate ribs and grooves which are designed to maintain the projectile in a direct course during its flight.

Claim.—The projectile consisting of the elongated and pointed head A and the stem B, the latter being composed of alternate ribs and grooves, and the whole being constructed substantially as and for the purpose set forth.

No. 35,796.—A. L. WEYMOUTH, of Boston, Mass.—*Improved Bit for Taming Horses.*—Patent dated July 1, 1862.—This invention relates to an improvement in a bit for which a patent was granted to the said Weymouth, July 30, 1861, and it consists in constructing the bit so that the mouth of the animal may be distended at the will of the driver, and when not required to be thus used, is capable of being used as an ordinary bit, thereby avoiding the necessity of using two bits.

Claim.—The combination of the pivoted levers E E′ with each other, and with the bars *b b′*, in the manner and for the purpose shown and described.

No. 35,797.—J. S. WHEAT, of Wheeling, Va.—*Improved Tanning Vat.*—Patent dated July 1, 1862.—The shell of the vat is constructed with tongued and grooved joints, and iron bolts running through the plank on the side of the tongues for the purpose of drawing the joints up when necessary.

A series of framed timbers are arranged around the sides and on the ends of the vat, with iron bolts or stirrups running through them crosswise and lengthwise of the vat in such a manner that the whole can be drawn together either sidewise or endwise, and at the same time the timbers which run across the manholes and retain the manhole covers, can be removed and replaced at pleasure.

Claim.—First, the arrangement of the iron bolts *c* running through the planks *a* of the shell A in combination with the tongues and grooves *b*, constructed and operating as and for the purpose described.

Second, the arrangement of the framed timbers B B′ C and bolts or stirrups *d d′ e* in combination with the shell A, as and for the purpose specified.

Third, the lugs *l* under the timbers B″ which pass over the manholes, in combination with bolts *d″*, as and for the purpose set forth.

No. 35,798.—A. J. WHITE, of East Foxborough, Mass.—*Improvement in Nibs for Scythe Snaths.*—Patent dated July 1, 1862.—This invention consists in the employment of double or compound nibs, composed each of two wooden handles, placed on spindles, which pass longitudinally through them. The upper and lower ends of the handles are connected by metal braces, the lower one being provided with a toothed ring which meshes into a corresponding toothed ring upon the spindle, for the purpose of changing the inclination of one of the handles to the snath. The object of the device is to admit of the mower changing his grasp to adapt the scythe for cutting either light or heavy grass.

Claim.—First, a double or compound nib, consisting of the handles *a b*, connected by braces *g h*, substantially as described.

Second, the toothed rings *k m*, in combination with the spindle *c*, for adjusting the position or incline of the handle *b* to the snath, substantially as set forth.

No. 35,799.—A. E. YOUNG, of Dorchester, Mass.—*Improved Glass Table Castors.*—Patent dated July 1, 1862.—This invention consists of a castor stand made of glass with a chambered and silvered base, and a glass or transparent bottle-holder, the latter being constructed with a series of flanches, annuli, or cups, arranged with respect to the upper surface of, and cast in one piece with the holder.

Claim.—The glass castor stand, made substantially as described, viz: with a chambered and silvered or light-reflecting base, and a glass or transparent bottle stand.

Also, making the said bottle stand with annular flanches or cups, arranged with respect to its upper surface, and cast in one piece with the remainder of the bottle stand, substantially as described.

No. 35,800.—G. R. BOYNTON, of Chicago, Ill., assignor to G. G. POPE and E. F. SLOCUM, of the same place.—*Improvement in Lanterns.*—Patent dated July 1, 1862.—In this lantern the oil cup is encompassed by a jacket, in which a spiral passage is formed, through which the air is admitted to the flame, for the purpose of preventing the flame from being affected by the swinging of the lamp or extinguished by a sudden movement of the same.

Claim.—The jacket F, in combination with the spiral wire or partition *d*, placed in the space *a* between the jacket and the oil cup or fountain B, substantially as and for the purpose set forth.

No. 35,801.—J. S. BRADFORD, of Baltimore, Md., assignor to J. C. MANNING, of the same place.—*Improvement in Burners for Coal Oil Lamps.*—Patent dated July 1, 1862.—This invention is explained by the claim.

Claim.—The application and use of vulcanized India-rubber as a base or bottom for burners for coal-oil or kerosene-oil lamps, and the flange or cut-off thereto, thereby breaking the metallic connexion, and preventing the communication of heat from the burner to the lamp or to the metallic socket in which said burner is fixed or screwed, in the manner and for the purpose set forth.

No. 35,802.—BENJAMIN DOUGLAS, of Middletown, Conn., assignor to W. and B. DOUGLAS, of the same place.—*Improvement in Pumps.*—Patent dated July 1, 1862.—This invention relates to an improvement in the method of hanging "side force pumps," by which they can be so adjusted as to bring the eduction nozzle at any desired point. The brackets are cast separately with a groove in their wings or bands which encompass the cylinder, and upon the latter are cast beads or projections fitting in the grooves in the brackets, the latter being composed of two parts connected by bolts, and all arranged so that the cylinder may be readily turned in its brackets.

Claim.—The securing of the pump cylinder A to its plank D by means of brackets C C, formed of two parts *b c*, connected together by bolts *d*, and fitted on the cylinder, substantially as and for the purpose set forth.

No. 35,803.—GEORGE NETTLETON, of Woodbury, Conn., assignor to A. F. ABBOTT, of Waterbury, Conn.—*Improvement in Sash Fasteners.*—Patent dated July 1, 1862.—This invention consists in the employment of a bolt which is held in position by a spiral spring, and operated by means of a lever provided at its inner side with a segmental projection having a V-shaped notch at its under side. This projection is fitted in a slot in a metal plate screwed to the edge of the sash.

Claim.—The combination of the bolt B, spiral spring E, and lever C, when the latter is fitted in a plate D, by means of a segment projection *e*, provided with a V-shaped notch *f*, and all applied to the sill of the sash, substantially as and for the purpose set forth.

No. 35,804.—ARAD WOODWORTH, 3d, of New York, N. Y., assignor to Himself, ALBERT BRIDGES, and J. C. LANE, of Jersey City, N. J.—*Improvement in Smoking Tubes.*—Patent dated July 1, 1862.—This invention consists in providing a separate and independent passage to conduct the smoke from the burning point in the tube to the mouth-piece so as to avoid passing it through the body of the tobacco in the process of being smoked or burned.

Claim.—The combination with the smoking tube of a suitable passage, substantially such as described, for the purpose of so conducting the smoke to the mouth-piece, essentially as set forth, as to avoid passing it through the body of tobacco or filling, for the purpose specified.

No. 35,805.—L. S. ALDER, of Cleona, Ind.—*Improvement in Machines for Sawing down Trees.*—Patent dated July 8, 1862.—This invention consists in the arrangement of a longitudinally sliding frame provided with a steam cylinder, a feed motion and the necessary pulleys to give motion to the saw, in combination with a truck running upon wheels in such a manner that the said frame can be readily brought to the desired locality and position, and that by the action of the steam cylinder the saw receives the desired motion. Combined with the longitudinally sliding frame is a series of rotary adjustable disks in such a manner that the saw, together with the driving pulleys and feed motion, can be set at any desired angle.

Claim.—First, the arrangement of the longitudinally sliding frame A, containing the driving pulley F, feed motion I J K L, or their equivalent, and a saw H or H*, in combination with the truck frame B, constructed and operating substantially as and for the purpose set forth.

Second, the arrangement of the rotary disks M O Q, in combination with the driving pulley F, feed motion I J K L, and saw H, constructed and operating substantially as and for the purpose described.

No. 35,806.—N. AUBIN, of Albany, N. Y.—*Improvement in Fluid Meters.*—Patent dated July 8, 1862.—This invention consists in the employment of a ball of India-rubber, or its equivalent, fitted loosely within a cylinder, which latter is provided with an aperture at each end and with a side pipe. The entrance of water into the cylinder causes the ball to move to one end of the cylinder and close the opening at that end: the pressure of water then acts upon a spring plate which moves a rod and thus actuates an arm and rock shaft, by which the water is made to enter at the aperture previously closed by the ball, which latter then moves along the cylinder and closes the aperture at the opposite end, when the operation is repeated.

Claim.—A reversing apparatus and valve, or valves, constructed and acting under a mode of operation substantially as described, in combination with a cylinder or its equivalent, in which the flow of water is checked or caused to cease by the stoppage of a motion of a ball, or its equivalent, for the purpose of acting substantially in the manner and for the purpose specified.

No. 35,807.—J A. BASSETT, of Salem, Mass.—*Improvement in the Manufacture of Gases for Illuminating and Other Purposes.*—Patent dated July 8, 1862.—The apparatus used in carrying out the object of this invention, consists of a series of superheating pipes placed in the lower part of a furnace in the form of a coil into which the steam passes from the boiler through a pipe, the supply being controlled by a valve. From these superheating pipes the steam passes through a pipe into decomposing retorts placed so as to receive the direct heat of the fire, and thus, during the decomposition of the hot steam by its contact with the incandescent carbon, no decrease of temperature occurs, the process being caused to go on uninterruptedly and with great rapidity.

Claim.—Preserving a uniform high temperature in the decomposing retort, by the employment of steam, superheated immediately previous to its introduction into said chamber, and introduced before its temperature is materially lowered, by means of apparatus constructed and arranged substantially as shown and described.

No. 35,808.—SAMUEL BOORN, of Lowell, Mass.—*Improvement in Cushions for Shuttle Boxes.*—Patent dated July 8, 1862.—This invention consists of a cushion formed of disks of leather and India-rubber and a layer of curled hair, applied to a metallic case placed upon each end of the race rod of a loom, in order to receive the blows of a picker or picker staff in its forward and backward movements.

Claim.—The improved cushion, as made of a combination of leather, India-rubber, and curled hair, arranged within a metallic case B, in manner and for the purpose set forth.

No. 35,809.—TIMOTHY L. CARLEY and AMOS JACKSON, of Marcellus, N. Y.—*Improved Water Wheel.*—Patent dated July 8, 1862.—To the upper rim of the wheel is secured a hub *c*, provided with curved arms. In the centre of the hub is a chamber to receive the bearing E, which is made to move up and down so as to adjust the wheel in connexion with a set screw G. To the lower annular plate of the wheel is bolted a hub D, in which is fitted a brush made to move loosely around and up or down on the spindle I, upon which the wheel turns. To the upper end of the spindle is fitted a collar K to hold the pivot H, upon which the bearing E rests.

Claim.—The parts C D E F G H I and J, when made as specified, and used for the purpose set forth.

No. 35,810.—J. E. DANIELS and G. S. KENDALL, of Boston, Mass.—*Improved Clothes Wringer.*—Patent dated July 8, 1862.—The shaft of the upper roll has its bearings in two boxes, which are free to slide up and down in vertical grooves in the standards. Upon the boxes rests a rigid bar, having upon its centre a disk or block of rubber, which supports the lower one of two arched pieces of wood-formed springs, their ends fitting in the vertical grooves. By means of a thumb screw pressing upon the upper spring, the requisite amount of pressure can be applied to the roll.

Claim.—Applying the pressure of the springs G' and H to the boxes *a* through the middle of the length of the bar E, substantially as described.

No. 35,811.—HENRI DE LAPPARENT, of Paris, France.—*Improved Process of Preserving Wood.*—Patent dated July 8, 1862.—The nature of this invention is explained by the claim.

Claim.—The carbonization of such parts of the wood or timber used in any structure as it may be desirable to protect by such means, by subjecting the said parts to the action of the flame of gas after they have been placed and united together in the structure, substantially as specified.

No. 35,812.—J. C. DOW, of Henderson, Minn., and IRA MYRICK, of Le Suer, Minn.—*Improvement in Parallel Rulers.*—Patent dated July 8, 1862.—The rollers are supported in bearings at the ends of the ruler, and upon the bearings are springs, so that by pressing the ruler at the point where the line is to be drawn, it will come in contact with the surface of the paper and thus be prevented from slipping.

Claim.—The application of springs made of metal, rubber, or any other suitable material, to a parallel ruler in the manner and for the purposes described.

No. 35,813.—A. A. DRAKE, of Flanders, N. J.—*Improved Power for Churning.*—Patent dated July 8, 1862.—This invention consists in an arrangement of gear wheels and pulleys and an oscillating beam attached to the dasher rod of a churn in connexion with a weighted box, by means of which latter, as it falls after being wound up, motion is imparted to the dasher rod.

Claim.—The churn dasher stem *n*, beam *m*, drum *d*, gear wheels *e f g h*, shaft *i*, fly wheel *j*, cord B, pulleys *a b c*, and weight box E, when combined in the manner and for the purpose shown and described.

No. 35,814.—J. A. FREESE, of Hanover, Ohio.—*Improvement in Corn Planters.*—Patent dated July 8, 1862.—The seed cells in the periphery of the wheel are provided with a slide, in connexion with which is an adjustable inclined plane attached to the frame of the machine, so arranged that, at the will of the operator, it may be readily adjusted so as to actuate the seed slide to cause the seed to drop from the hopper, or adjusted so that the slide will not be actuated by it.

Claim.—The seed cell or hopper E, one or more, placed in the rim of the wheel and provided with the slide F having the spring *i* attached, in combination with the adjustable inclined plane G attached to the frame of the machine, all arranged for joint operation as and for the purpose specified.

No. 35,815.—W. P. PENN, J. GEISS, and J. BROSIUS, of Belleville, Ill.—*Improvement in Harvesters.*—Patent dated July 8, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—Making the finger bar flat and sloping the front and rear edges thereof backward and downward so as to give the cross section of the bar a rhomboidal form, as represented.

Also, the shoulder piece J in combination with the finger, when said finger is made open on the under side thereof, so as to leave an open space at the rear of the sickle bar under the fingers, in the manner as shown and described.

We do not claim the use of the screw sector for raising and lowering the frame and cutting apparatus, but we claim the screw B, the sector A, the main shaft D, and the main frame C, when these several parts are constructed and arranged in relation to each other as set forth.

No. 35,816.—JOSEPH GILL, of Willistown, Pa.—*Improved Washing Machine.*—Patent dated July 8, 1862.—This invention consists in the use of a semicircular tub corrugated on its inner sides and hung upon axles. It is acted upon by a convex corrugated rubber. Motion is imparted to the rubber and tub by means of levers, a rod, and arms connected to a shaft so as to cause them to move in opposite directions.

Claim.—The arrangement, adjustment, and combination of the levers, rods, and arms acting in connexion with the concave corrugated segmental tube and the rubber, as set forth and described.

No. 35,817.—A. GIRAUDAT, of New York, N. Y.—*Improvement in Scroll Saws.*—Patent dated July 8, 1862.—The object of this invention is to produce a scroll saw which can be easily stretched, and which is hung so that the material to be cut can be turned freely in either direction. The nature of the invention is explained by the claim.

Claim.—The employment or use of a cord F, composed in whole or part of fine steel wire, and so arranged as not to interfere with the motion of the work to be cut by passing it through the saw kerf and close to the back of the saw in the manner described.

No. 35,818.—J. A. GOEWEY, of Albany, N. Y.—*Improvement in Teakettles.*—Patent dated July 8, 1862.—This invention consists in a method of attaching a cover that has a side movement horizontally to a teakettle in such a manner that its flange will fall into the opening of the kettle so as to secure a tight joint and prevent the cover from accidentally falling open. When the bail is secured in its place the cover cannot be removed from its fastening without first removing the bail.

Claim.—The combination of the stem *f* and socket *b* with the flange *k* of the teakettle cover, so arranged that when the cover has moved over the opening in the kettle, the flange *k* will fall therein, substantially in the manner and for the purposes described.

Also, attaching the cover to the teakettle by means of the stem *f* and socket *b* in such a manner that when the bail D is raised it cannot be removed from its place, substantially as described.

No. 35,819.—J. S. HALL, of Pittsburg, Pa.—*Improvement in Ploughshares.*—Patent dated July 8, 1862.—This invention consists in forming a ploughshare with a cutter and blade from a single piece of plate steel or iron by means of dies, thus avoiding the necessity of welding.

Claim.—Drawing and bending a ploughshare out of a single piece of steel or iron that shall have a blade B and cutter A upon it when finished, substantially as described.

No. 35,820.—B. F. HARRIMAN, of Warner, N. H.—*Improvement in Cheese Press.*—Patent dated July 8, 1862.—In combination with a movable frame and stationary table is arranged a series of pulleys in such a manner that one or more of said pulleys shall be attached to the centre of the lower cross bar of the movable frame, and the upper cross bar shall be kept parallel with the table upon which the cheese is placed, for the purpose of securing an even downward pressure upon the cheese.

Claim.—The arrangement of one or more pulleys D under the centre of the movable frame C in combination with the pulleys E, windlass G, and with the stationary table A, constructed and operating substantially as and for the purpose shown and described.

No. 35,821.—G. E. HAYES, of Buffalo, N. Y.—*Improvement in Fastening Covers to Vulcanizing Flasks.*—Patent dated July 8, 1862.—This invention consists in the employment of two or more set screws passing through a screw ring which screws on the upper edge of the cylindrical vulcanizing vessel, and which bears upon the edge of the cover so that the set screws, acting in connexion with the screw ring, produce a perfectly steam-tight joint between the cover and the cylinder. From the lower surface of the cover a flange projects beyond the packing so as to form a guide for the cover and strengthen the upper edge of the cylinder.

Claim.—First, the arrangement of two or more set screws *e*, in combination with the screw ring C, cover A, and cylinder B, as and for the purpose shown and described.

Second, the projecting flange *f*, projecting from the under side of the cover A and catching on the inside of the cylinder B, as and for the purpose specified.

No. 35,822.—ISAAC HAYES, of Philadelphia, Pa.—*Improved Water Wheel.*—Patent dated July 8, 1862.—This invention relates particularly to the hydraulic wheel known as "Barker's Mill," and it consists in conducting the water through a supply pipe leading from the head of the water power to the upper end of the wheel, and then in spiral directions downward through the said wheel to the discharge orifice at its circumference by means of a series of tapering spiral tubes in combination with a central chamber fixed to the shaft of the wheel and attached to the said supply pipe, for the purpose of increasing the effective power of the said Barker's wheel.

Claim.—The employment of the tapering spiral tubes A A A in combination with the central chamber C and continuous supply pipe D, the same being arranged to operate together in the manner described for the purpose specified.

No. 35,823.—DAVID HENDERSON, of Merrimack, N. H.—*Improvement in Machines for Dressing and Drying Woollen Cloths.*—Patent dated July 8, 1862.—This invention consists in the employment of two or more steam cylinders with the necessary carrying or guiding rollers arranged with a hot-air chamber heated by steam pipes, a rotary blower, rotating tentering wheels and brush or napping cylinders, for the purpose of subjecting woollen cloths to the process of tentering, drying, napping or brushing, and pressing, at one operation.

Claim.—The combination of the brush or napping cylinders I I, steam cylinders D D, rotary blower H, rotary tenter wheels L L, receiving roller M, and pressure roller N, all arranged as and for the purpose specified.

No. 35,824.—J. L. HENRY, of the District of Columbia.—*Improvement in Projectiles for Rifled Ordnance.*—Patent dated July 8, 1862.—The nature of this invention will be understood from the claim.

Claim.—First, combining one or more flexible bands with a projectile for rifled ordnance in any manner, substantially as described and shown, for the purposes set forth.

Second, two or more separate sets of gas channels *c* leading from the cavity *d* in the base of the projectile to the under surface of two or more bands combined with the projectile, substantially as and for the purposes set forth.

Third, causing a portion of the bands, as set forth, or the metal which secures them to the shot, to neatly fit the bore, for the purposes set forth.

Fourth, the combination of an inflexible stop or rest with a concussion piston, arranged substantially as set forth and for the purpose described.

Fifth, the use of gas chambers beneath a band or bands, so proportioned as to contain just sufficient gas to cause the band or bands to effect the end desired, for the reasons set forth.

Sixth, combining a percussion piston with a shell, substantially as described and shown, so as to render unnecessary a spring or other equivalent heretofore used to prevent accidental explosion.

Seventh, combining an anvil screw, or its equivalent, with a shell, in a manner substantially as shown and for the purposes set forth.

Eighth, the combination of the percussion piston and anvil screw with each other and with the shell, substantially as and for the purposes set forth and shown.

Ninth, combining a screw, or its equivalent, with a shell so as to admit of being adjusted from the outside of the shell to expose the cap within, substantially as set forth.

No. 35,825.—W. W. HUBBELL, of Philadelphia, Pa.—*Improvement in Projectiles for Rifled Ordnance.*—Patent dated July 8, 1862.—This invention is designed as an improvement upon the patent granted to the said Hubbell January 21, 1860, and it consists in extending the thin metal facing forward of the soft metal filling, and around the cylindrical hard body of the projectile, so as to secure it more firmly while the soft metal expands outward with the back part of this metal facing. In the groove forward of the bevel face or expanding portion of the soft metal is placed a coil of galvanized wire, so as to secure it by strengthening that part which is fast in the groove. The expanding portion of the soft metal is strengthened by casting it around a tinned sheet-iron ring, which expands outwardly with the soft metal. An annular groove is formed in the copper band or facing with the lead filling underneath and behind it, to secure the facing more firmly, and prevent it from stripping backward.

Claim.—First, extending the facing of copper or similar metal forward of the soft metal filling, and around the cylindrical hard metal body of the projectile, so as to secure the facing more firmly, while the soft metal shall expand outward, with the back part of this metal facing into the rifle grooves of the gun, substantially as described.

Second, in further securing the removing or expanding portion of the soft metal by the coil of wire in the front part of the metal within the groove *d*, as described.

Third, also in strengthening that part of the soft metal which expands, by casting it around the tinned sheet-iron ring, with slits or otherwise, to expand with the soft metal and hold on to it at the muzzle of the gun, substantially as described

Fourth, also in further securing the copper or outer facing to the soft metal, by forming the annular groove *c* in it, with the lead filling underneath and behind it, substantially as described.

Claim.—First, the arrangement of the swivel joint

No. 35,826.—ALLEN JUDD, of Springfield, Mass.—*Improvement in Steam Engines.*—Patent dated July 8, 1862.—This invention is explained by the claim.

Claim.—One or more cylinders, with piston rods to match them, applied to a fly wheel, the cylinders being hung to the wheel in such a manner as to be permitted to vibrate, and the piston rods to be hung at one end to a stationary shaft set within said wheel, one side from its centre, so as to give a vibrating motion to each cylinder and its piston rod as they revolve with the wheel, and give a propelling force to it by the pressure of steam, all as shown.

No. 35,827.—D. F. and A. P. LUSE, of Spring Mills, Pa.—*Improvement in Stump Extractor.*—Patent dated July 8, 1862.—This invention consists in so attaching the lever to the elevating racks that each rack shall act alternately as the fulcrum of said lever, while both are allowed a certain degree of deviation from a vertical line to accommodate them to the varying line of draught. The pawls or dogs, which engage with the rack, are composed of a segment provided with a series of holes, and rising from a forked piece pivoted to ears upon the block. A rod connects this segment with a pin that slides between the segments and communicates to it a longitudinal movement in relation to the block.

Claim.—The combination of the lever G, with the racks F F', when each of the said racks act alternately as the fulcrum of the said lever, and when both are allowed to change their line of draught by means of the rounded block A and bevelled mortises *e e*, substantially as described.

Also, the combination of the segment *i*, pin *l*, and rod *n*, as and for the purpose specified.

No. 35,828.—JOHN MCLAUGHLIN, of Monongahela City, Pa.—*Improvement in Straw Cutters.*—Patent dated July 8, 1862.—This invention consists in an arrangement of levers, cams, slides, cutting and pressing frames, in combination with a straw box having an oscillating and horizontal motion.

Claim.—The straw box *a*, furnished with slides *m*, said box having horizontal and oscillating movements, in combination with rod *l*, cam *e*, frames *f* and *h*, and strap *i*, arranged, constructed, and operated in the manner described and for the purpose set forth.

No. 35,829.—J. L. MCPHERSON, of Sacramento City, Cal.—*Improvement in Pumps.*—Patent dated July 8, 1862.—The object of this invention is to obtain a pump which may, by a slight manipulation, be changed from a force to a lift or suction pump, and *vice versa*, and also by an arrangement of parts, have its plunger rod form an air chamber and buoy combined, so that each of the aforesaid elements will perform its proper function equally as well as if applied separately in the ordinary way. Its construction does not admit of a brief description.

Claim.—First, the movable box C, in the lower part B of the pump cylinder, provided with the tube D and valve F, and arranged, as shown, to admit of a chamber E around the tube D within the box C, as set forth.

Second, the central valve tube H in the plunger box G, in connexion with the inner inclined side of the plunger box and the inclined or inverted cone-shaped end *m* of the tube J, for the purpose of forming a chamber L around the tube H, and also for the purpose of securing the packing K to or in the plunger box, as described.

Third, the tube J, arranged and applied to the plunger box G, and within the pump cylinder, as shown, performing the triple function of a plunger rod, air chamber, and buoy, as set forth.

Fourth, the lever P, when arranged as shown, to be capable of being made fixed or to rock, and used in connexion with the lever O and tube J, as and for the purpose specified.

No. 35,830.—LOUIS and JACOB MILLER, of Canton, Ohio.—*Improvement in Harvesters.*—Patent dated July 8, 1862.—The nature and object of this invention are explained by the claim.

Claim.—First, the combination and arrangement of the jointed pulley supporters *j l* between the drive wheel and reel shaft, so that the reel may accommodate itself to the raising and lowering of the platform, and be susceptible of being raised or lowered on the reel post without slacking the belt or belts, substantially as described.

Also, in combination with the hanger, the split or divided journal box, and adjusting device connected to it, so that the journal box, as it wears away in the direction of the resistance of the pitman or cutters, may be set up to the shaft that works the cutters, substantially as and for the purpose set forth and explained.

No. 35,831.—J. C. MOORE, of Peoria, Ill.—*Improvement in Corn Planters.*—Patent dated July 8, 1862.—This machine is constructed with two frames, one supported upon wheels, and the other, which carries the seed-distributing mechanism, supported by runners or ploughs, the said frames being connected by a swivel hinge in the centre, and guiding buffers on both sides, in such a manner that each frame can accommodate itself to the inequalities of the ground independently of the other, and that by depressing the rear end of the after frame, the central portions of both frames will be raised, and the ploughs thrown out of the ground. A lever is arranged with its bearings, one on the front part of the forward frame, and one before and behind the axle, which supports the after frame, so that by the weight of the operator the two frames be may kept nearly level, and the ploughs prevented from rising out of the ground.

Claim.—First, the arrangement of the swivel joint *a*, and guiding buffers *e f*, in combination with the frame A, supporting the driver's seat D, and with the frame B, carrying the seed-dropping mechanism, constructed and operating as and for the purpose shown and described.

Second, the arrangement of the lever I, in combination with the hinged frames A B, constructed and operating as and for the purpose set forth.

No. 35,832.—FRANKLIN MUZZY, of Bangor, Maine.—*Improvement in Machines for Sawing Shingles and other Lumber.*—Patent dated July 8, 1862.—This invention consists in the combination with a circular saw, of a carriage fed downwards by means of a connexion with the power that operates the saw, in a direction so nearly perpendicular as to present the centre of the shingle block to the upper half of the saw; it also consists in an arrangement of devices for changing the motion of the carriage, setting the block, and automatically regulating the feed motion of the feed carriage to correspond with the width of the block.

Claim.—First, reversing the reciprocating vertical action of the carriage for feeding the bolt to the saw automatically by the operation of the mechanism or its equivalent, connected with the vibrating shaft P, substantially as described.

Second, the combination of the latches *c d*, pressure cam *a*, and pivoted standard *f*, operated by either weights or springs, to throw the pinion *p* in and out of gear, substantially in the manner explained.

Third, the combination of the lever *i*, pawl *i'*, and wheels S 1 and S 2, actuated by suitable studs or cams *m k*, so as to move the racks *h h'* forward alternately or simultaneously as explained, in connexion with a shingle machine carriage, moving in a direction so nearly perpendicular as to present the centre of a shingle block to the upper half of the saw, substantially as set forth.

Fourth, the gauge lever 2, and the trip lever 5, employed in combination with the latch *d*, to regulate the motion of a shingle machine carriage, moving so nearly perpendicular as to present the centre of the shingle block to the upper half of the saw, substantially as set forth.

Fifth, the combination of the stud R, slide R 1, and hooks R 2 R 3, operating in the described connexion with the head block N, and trip lever 5, to arrest the motion of the carriage when the bolt is worked up.

No. 35,833.—CÆSAR NEUMANN, of Boston, Mass.—*Improvement in Mittens.*—Patent dated July 8, 1862.—Across the palm or back portion of the mitten, or in the direction of its length, is a slit, by means of which the portion covering the fingers can be easily removed and turned back upon the hand without removing the whole mitten. The thumb covering may also be made to operate in a similar manner.

Claim.—So forming and constructing a mitten or covering for the hand, that the part which covers the fingers is susceptible of being turned back upon the hand so as to leave the fingers free without entirely removing the mitten, substantially as described.

Also, forming a slit in the thumb covering, so that it may be turned back upon the mitten and leave the thumb free, substantially as described.

No. 35,834.—WILLIAM PAINTER, of Fallston, Md.—*Improvement in Counterfeit Coin Detectors.*—Patent dated July 8, 1862.—This invention consists in the employment of one or more suspended or tilting spouts applied to a counter or table over a drawer or receptacle, and arranged with gauges in such a manner, that each piece of coin in its passage through the detector is weighed and gauged, and any spurious piece, which cannot pass these tests, will be at once detected.

Claim.—The particular arrangement of the horizontal plate A, vertical plate *a*, inclined plane *b*, and spout I, provided with the slide *c c*, and stop *g*, and suspended between the pendent yielding rods *d d*, substantially as and for the purpose set forth.

No. 35,835.—L. C. OBER, of Boston, Mass.—*Improvement in Lanterns.*—Patent dated July 8, 1862.—This invention is explained by the claim.

Claim.—The arrangement of India-rubber or other elastic packing between the deflector, supporter and glass casing of the lantern, whereby the currents of air are prevented from passing up between the said supporter and the casing, and are caused to flow into the deflector, and through and around the outer surface thereof, substantially in manner and for the purpose set forth.

No. 35,836.—W. P. PENN, JACOB GEISS, and JACOB BROSIUS, of Belleville, Illinois.—*Improvement in Harvesters.*—Patent dated July 8, 1862.—The object of this invention is to provide a simple and efficient means for raising and lowering the cutting apparatus, and for holding it at the desired height from the ground, or for allowing it to drag upon the ground without disuniting the operating gearing; and also to provide the belt, which drives the reel, with a yielding tightener, by means of a spiral spring around the adjusting screw attached to the journal box, which supports the journal of the reel shaft, so that the end of the reel shaft is suspended from the spring, and in case the belt shrinks or twists it will still continue to operate. The caster wheel is pivoted to a sector hinged in lugs upon the outside of the shoe so as to swing in a horizontal plane. The sector is provided with a series of holes near

its periphery to correspond with a hole in the arm, by which means the outer end of the cutting apparatus can be raised and lowered to correspond with the rear end.

Claim.—First, the bracket B, the circular plate E, the main shaft C, the lever F, the main frame A, and the driver's seat G, arranged in respect to each other, substantially in the manner described for the purpose specified.

Second, in combination with the reel post and shaft S, journal box R, and screw Q, the spring P, as shown and described for the purpose specified.

Third, adjusting the caster wheel *k*, by means of the perforated arms L, perforated segment M, and pin *f*, in the manner and for the purpose shown and described.

No. 35,837.—JAMES PERRY, of Brookyln, N. Y.—*Improved Apparatus for Measuring Out and Discharging Dough under Pressure.*—Patent dated July 8, 1862.—This invention is designed to be used in the manufacture of bread, the dough and paste for which are kneaded and prepared under a pressure of gas in a closed vessel, and it consists in a method of discharging the dough from the kneading vessel so that the loaves shall be uniform in size and appearance. An intermediate kneading chamber is used between the main kneading vessel and a measuring device and a piston and cylinder, arranged and operated in such a manner as to measure and discharge the dough received through the said intermediate chamber with rapidity and regularity.

Claim.—First, the employment of a piston and cylinder, in combination with means for varying the extent of the motion, for the purpose of measuring out the exact quantity of dough to form the several-sized loaves, and to regulate the flow thereof, substantially as set forth.

Second, regulating the force of the discharge of the dough from such cylinder by the application of a greater or less resistance to the motion of the piston, for the purpose set forth.

Third, the use of an internal cylinder having a partial rotating or equivalent movement, in combination with a piston moving in accordance with internal pressure in the kneading machine, for the purpose above specified.

Fourth, the employment of a receptacle interposed between the kneading vessel and a discharger, so as to promote the effective operation of the latter, and to prevent the escape and loss of gas, substantially as set forth.

No. 35,838.—JACOB REESE, of Pittsburg, Pa.—*Improvement in Furnaces for Coal Oil Stills.*—Patent dated July 8, 1862.—The nature of this invention will be understood from the claim, the object being to construct a still of any required length or capacity, and with a fire chamber under it throughout its entire length in such a manner as to prevent the exposure of any seam, joint or rivet to the action of the fire, and also to prevent any oil from escaping from such joint or seam to the fire.

Claim.—The mode described, of constructing stills, the bottom of which is composed of more than one piece, and furnaces therefor, in such a manner that all the joints, seams, and rivets which are placed inside of the fire chamber shall rest upon or be covered by walls or supports of brick work or cement, and thus protected from the direct action of the fire, substantially in the manner and for the purpose set forth.

No. 35,839.—J. R. ROBERTSON, of Syracuse, N. Y.—*Improvement in Vegetable Cutters.*—Patent dated July 8, 1862.—This machine consists of a box containing a hollow cylinder, having upon its periphery a series of cutters, arranged as shown in the engraving, so that as the cylinder revolves the cut matter will be forced into the interior of the same, and drop out at its open ends in thin and narrow strips.

Claim.—The combination of the box A, hopper *d*, and cylinder C, with its cutters, constructed and arranged substantially as described.

Also, leaving the ends of the cylinder open for the escape of the cut matter, when said cylinder is constructed with its cutters, arranged as described and combined with the hopper, substantially as and for the purposes set forth.

No. 35,840.—G. C. G. SAUR, of Washington, D. C.—*Improved Hair Dye.*—Patent dated July 8, 1862.—The wash used in this preparation consists of water, alcohol, and gallic acid, and the solution consists of a compound of nitrate of silver, gum-arabic, spirits of ammonia and distilled water.

Claim.—The wash No. 1, and solution No. 2, when compounded and applied, substantially as and for the purpose described.

No. 35,841.—C. G. SCHNEIDER, of Washington, D. C.—*Improvement in Chamber Buckets.*—Patent dated July 8, 1862.—This invention consists in securing the cover to the vessel by means of a handle operating a cross-bar secured to the lower end of the shank of the handle. The ends of this cross-bar pass under inclined offsets upon the inner side of the vessel, and as it is moved around draws the cover tightly upon the vessel, the pressure being increased by the introduction of a spring surrounding the shank of the handle on the upper side of the cover.

Claim.—Securing the cover E to the annular head or top B of the vessel by means of the handle G, the cross-bar K, which is secured to the lower end of the shank F of said handle, the spring *m*, which embraces the said shank of the handle above the cover, and the offsets D D, from opposite sides of the inner periphery of the said ring-shaped top B of the vessel, when the said parts are arranged and are made to operate substantially in the manner and for the purpose set forth.

No. 35,842.—JEHYLEMAN SHAW, of Bridgeport, Conn.—*Improved Apparatus for Saving Silver from Waste Solutions.*—Patent dated July 8, 1862.—The nature of this invention will be understood from the claim.

Claim.—First, attaching to the waste-pipe of the sink or basin, into which persons using silver in solutions suffer them to be wasted, a vessel so arranged and constructed that the liquids passing from the sink shall run into, through, and out of said vessel, and between the time of entering said vessel and escaping therefrom shall be brought into contact with such chemicals or metals as will cause the whole or any part of the silver contained in solution to be precipitated and retained in said vessel, while the worthless material is allowed to escape.

Second, the use of the filter B, or its equivalent, for the purpose of preventing small particles of silver from escaping after the liquids have been brought into contact with the chemicals, as described.

No. 35,843.—ZADOK STREET, of Salem, Ohio.—*Improvement in Brick and Tile Machines.*—Patent dated July 8, 1862.—A sliding gate is employed to close the apertures in the lower part of the grinding-mill, communicating with the pressing machine, for the purpose of separating the clay which is to be pressed into the mould from that which remains in the mill. Near the lower edge of the gate is hinged a follower, which is actuated by a lever to press the clay into the moulds. In connexion with the above is a movable mould, provided with partitions of a material adapted to impart a smooth surface to the bricks. Attached to each end of a bar, sliding on guides, is a wire which is drawn forward to produce an even separation between the clay from the moulds and that left within the box from which it is taken.

Claim.—First, the combination of the sliding gate E, follower A, hinged thereto by its inner edge and lever *h*, constructed, arranged and operating in the manner described, to first separate the clay in the box D from that within the mill A, and afterward press the former downward and outward into the moulds I, all as specified.

Second, the wire cut-off K, so arranged and operated by means of bars L and guides *l l* as to separate the surplus clay from that pressed into the moulds, as described.

No. 35,844.—GEORGE STUMP, of New York, N. Y.—*Improvement in Evaporating Pans for Saccharine Liquids.*—Patent dated July 8, 1862.—This apparatus consists of a double-chambered bed-plate combined with a double set of C-shaped tubes, which rise from a detachable tube-sheet in the interior of the pan, and which form a double connexion between the two chambers of the bed-plates in such a manner that steam introduced into one of said chambers passes through the C-shaped tubes into the other chamber, which arrangement of the heating-tubes admits of an extension heating surface at different levels of the liquid, and at the same time the water, which may condense in the said tubes, readily runs off into one the other of the chambers, and thus any danger of freezing is avoided. The tubes may also be readily cleaned on the outside without breaking any joint, and on the inside by removing the tube-sheet.

Claim.—The arrangement of the double-chambered bed-plate B, in combination with the detachable tube-sheet C, double set of C-shaped heating tubes E E', and pan A, all constructed and operating substantially as and for the purpose shown and described.

Also, the double set of C-shaped heating-tubes E E', bent at different heights and at different widths, in combination with the pan A, as and for the purposes specified.

No. 35,845.—MATTHIAS SWANK, of Philadelphia, Pa.—*Improvement in Relieving Steam Boilers of Cinders.*—Patent dated July 8, 1862.—This invention consists in connecting the bottom of the interior of the combustion-chamber, or that part of the boiler between the flue-sheet and furnace, with the outer shell of the boiler, by means of tubes which may be opened or closed at pleasure by a sliding-valve on the exterior of the boiler, whereby the ashes and cinders that collect in the bottom of the combustion-chamber may be readily removed.

Claim.—The combination and arrangement to relieve combustion-chambers of steam-boilers, or that part of the boiler between the furnace and flue-sheet, of ashes or cinders, substantially as represented and operated for the purpose set forth.

No. 35,846.—T. R. TIMBY, of Worcester, Mass.—*Improvement in Revolving Battery Towers.*—Patent dated July 8, 1862.—This invention consists in combining with a revolving tower a central and independently revolving shaft, upon the top of which and in close proximity to the look-out is arranged the commander's platform or station, which is under his constant control, so that it may, at his option, be revolved in either direction, or remain stationary, irrespective of the condition of the tower, whether the latter be in motion or at rest.

Claim.—A revolving tower for land or water, designed for offensive or defensive warfare, when combined with an independently rotating shaft, upon the top of which is arranged the commander's platform or station, as described.

No. 35,847.—T. R. TIMBY, of Worcester, Mass.—*Improvement in Discharging Guns in Revolving Towers by Electricity.*—Patent dated July 8, 1862.—The nature of this invention will be understood from the claims.

Claim.—First, arranging a telescopic or other sight, or an index on a platform capable of revolving independently of the tower in a direct vertical plane over a circuit-closer, or a series of them, having metallic connexion with a bar attached to, but insulated from said revolving shaft, as and for the purpose specified.

Second, making the independently-revolving shaft in connexion with the metallic structure of the tower, a part of the electric circuit, as described.

Third, attaching to and insulating from said revolving shaft a vertical bar revolving therewith, to which is metallically attached one or a series of circuit-closers, and which forms another part of the electric circuit, as set forth.

Fourth, placing the battery on or under the commander's platform, so that it shall revolve therewith, the poles of the said battery being connected with the shaft which carries the said platform and the attached but insulated bar, as and for the purpose described.

Fifth, the described construction of the circuit-closers, operated by springs so as to be allowed to pass each other, and then revert automatically to their original position.

Sixth, the form and construction of the platinum wires, whereby the electric circuit is preserved and the vent or fuze penetrated, as set forth.

Seventh, the arrangement of the conducting wires, whereby, in connexion with the tower, the shaft, platinum, wires, bar and circuit-closers, the electrical circuit is completed, as described.

No. 35,848.—W. H. TOWERS, of New York, N. Y.—*Improvement in Skeleton Skirts.*—Patent dated July 8, 1862.—This invention consists in combining in one garment the hoop skirt and a small bandage or corset in such a manner as not only to cause the latter to form a wide belt for the support of the hoop skirt and skirts outside and a substitute for corsets, but also serves as a brace to support and hold the bustle of the hoop skirt in its proper position.

Claim.—Combining a hoop skirt and corset, with bustle attached, in one garment, in the manner and for the purpose set forth.

No. 35,849.—R. D. TURNER, of New York, N. Y.—*Improvement in Car Coupling.*—Patent dated July 8, 1862.—Each bumper head of this coupling is provided with a link permanently secured within a flaring mouth by means of a pin. At the front end of a longitudinal slot, in the upper side of the mouth of each bumper head, is hinged a catch which falls into a notch or shoulder formed in the lower side of the mouth of each bumper head when the connexion is made. The hinged catches are formed so as to swing freely inwards and upwards when they are outwardly struck by the links, and also provided with a shoulder to prevent them from being elevated to such a position as to reset themselves by gravity when relieved from all lifting force.

Claim.—The use of the permanent pins K K′, the links I I′, and the hinged catches B B′, when arranged with the bumper heads A A′ of said coupling, in such a manner that the said parts are enabled to jointly operate with each other, substantially as set forth.

Also, the permanent attachment of a link to each bumper head of the improved car coupling, when a vibrating catch is pointed to each of the bumper heads, substantially in the manner and for the purpose set forth.

Also, when a vibrating catch B and a link I are permanently connected with each bumper head or the improved car coupling, closing the mouth of the catch-receiving slot in the upper side of the mouth of the said bumper head by means of the flanged projection from the head of the said vibrating catch, substantially as represented in the drawings.

Also, giving such a shape to the head portion of each hinged catch B or B′ as will prevent it from being elevated to a higher position than that represented in the drawings; but this only when the vibrating catches B B′ and the links I I′ are combined with the bumper heads A A′, in the manner represented in the drawings.

No. 35,850.—A. H. VAN GIESON, of Newark, N. J.—*Improvement in Leather-Splitting Machine.*—Patent dated July 8, 1862.—This invention consists in the employment of a bed or table, of the form shown in the engraving, over which the leather is drawn before coming in contact with the knife that splits it, in connexion with an adjustable gauge directly in front of the edge of the knife and one in the rear of the same. The leather is pressed down upon the beds by fingers which are held down by means of levers weighted at their outer ends. The leather is held upon the bed, before the fingers begin to act upon it, by a roller, and is drawn through the machine by means of a roller, upon which it is prevented from slipping by a friction roller. The knife is attached to a rod which is actuated by means of a cam and the driving shaft and a spring, so as to produce a reciprocating motion.

Claim.—First, the combination of the bed I, fingers 2 2, guage 6, guage 25, and roller 5, constructed and operated as described.

Second, the combination of the bed I, fingers 2 2, guage 6, guage 25, and roller 5, with the knife 7, and rollers 9 and 10, as set forth.

No. 35,851.—LOUIS WACKER, of Buffalo, N. Y.—*Improvement in Lining Billiard Cushions.*—Patent dated July 8, 1862.—The cushion, which is composed of India-rubber, secured to a seat, is covered with a strip of previously prepared raw hide, which has been stretched nearly to the extent of its tension and dried, after which it is made of an equal thickness and chemically prepared and subjected to a heavy pressure.

Claim.—The combination of the covering C, of raw hide, prepared in the manner specified, with the billiard cushion B D E *d*, constructed and arranged as shown and described.

No. 35,852.—J. A. WHITNEY, of Maryland, N. Y.—*Improvement in Harresters.*—Patent dated July 8, 1862.—The nature and object of this invention are explained by the claim and engraving.

Claim.—First, the combination of the sickle and its driving mechanism with the swinging frame G, constructed and operating in connexion with the main frame A, and geared wheel *j′*, substantially as shown and described, so that when the front end of said frame is raised the vibrations of the sickle will cease; and when said frame is allowed to descend, the driving mechanism of the sickle will fall into gear by its own gravity; all as set forth.

Second, the combination of the lever F, with the swinging frame G, and the driver's seat D, as shown and described; so that when said lever is pushed forward the sickle will be raised and its vibrations will be stopped; and when said lever is pulled backward in the manner described the sickle will be temporarily raised without stopping its vibrations; all as set forth.

No. 35,853.—CHARLES BURLEIGH, of Fitchburg, Mass., assignor to PUTNAM MACHINE COMPANY, of the same place.—*Improvement in Friction Pulley.*—Patent dated July 8, 1862.—This invention consists in the employment of a pulley fitting loosely upon a shaft and driven by a belt from any suitable power, in combination with a friction ring which is cut open at one part so as to admit of its expanding, by means of which, when operated by a lever, its outer face is caused to come in contact with the inner face of the pulley, and thus, by friction, moves the latter and drives the shaft.

Claim.—The loose pulley B, in combination with the expanding ring D, connected with the shaft A, and operated substantially in the manner specified.

No. 35,854.—J. F. GREENE, of Warwick, R. I., assignor to S. T. B. TOBEY, of Providence, R. I.—*Improved Water-proof Fabric.*—Patent dated July 8, 1862.—This invention is explained by the claim.

Claim.—The combination of the disintegrated fibres of felt, or fur, with a surface of India-rubber, either in sheets or when attached to a base of textile or felted fabrics, or to leather, so as to form a new evenly-napped water-proof fabric, substantially as described.

No. 35,855.—J. S. GREENE, of Warwick, R. I, assignor to S. T. B. TOBEY, of Providence, R. I.—*Improved Machine for Manufacturing Water-proof Fabrics.*—Patent dated July 8, 1862.—In the operation of this machine the upper and lower calender rolls are heated to a suitable temperature by steam, in the usual manner, when the calender is put in motion and an endless band moves with it beneath the sifting machine, which is also put in motion. The flocks or fibre fall upon the surface of the coating of India-rubber and are carried with the endless band between the rolls of the calender, when they are combined with the rubber softened by the heat. In combination with the above are two cylindrical brushes, revolving at different rates of speed, and serve, the one to remove the surplus fibre and cause that which is combined with the softened India-rubber to lie in nearly parallel lines, while the upper brush serves to remove any flocks or fibre which may adhere to the cloth.

Claim.—The combination of the calender rolls, the machine for sifting fibrous flocks, and the brushes to cause the fibres to be laid straight and to move the surplus, operating upon a fabric composed of a sheet or surface of India-rubber, attached to cloth or other material, as a base, and producing a napped or flocked India-rubber fabric by one operation, substantially as described.

No. 35,856.—J. M. HORTON, of Albany, N. Y., assignor to J. H. HUMPHREY, of the same place.—*Improvement in Shank Socket for Auger Handles.*—Patent dated July 8, 1862.—Surrounding the centre of the handle of the auger is a metallic band, from the lower side of which projects a cylinder having recesses on opposite sides and across the bottom for the purpose of receiving jaws or grips which fit within the recesses and move to and from the centre of the socket. A screw-thread is cut upon the cylinder upon which is fitted a nut to hold the grips in place, by which means the socket is readily adapted to augers of different sizes.

Claim.—The band A with its projecting cylinder C, having a screw-thread cut upon it, and having the recesses *a* and *b* formed therein to receive the grips, the grips B and D formed and fitted as described.

Also, the nut N fitted to the screw-thread of the cylinder, the whole arranged and combined substantially in the manner and for the purpose set forth in the specification.

No. 35,857.—E. R. SCOTT, of Philadelphia, Pa., assignor to Himself and W. L. GERMON, of the same place.—*Improved Apparatus for Producing Vignette Photographs.*—Patent dated July 8, 1862.—This apparatus is composed of a metallic frame, having slightly elevated sides in a groove in the upper part of which slides a metallic plate. This plate is provided with an oval opening corresponding to the size of the vignette required, and above it is a ground-glass plate. A small metal plate is also arranged to be slid over more or less of the lower portion of the oval, in order to cut off the lower portion of the vignette and the display of the body.

Claim.—First, the combination of the frame AA with elevated sides B B, sliding plate C, oval opening D, and ground-glass E.

Second, making the plate C, which contains the oval opening, slightly elevated above the glass negative.

Third, the use of a sliding plate X to cut off the lower portion of the oval if desired.

No. 35,858.—JOSEPH SEDGEBEER, of Cincinnati, Ohio, assignor to Himself and JAMES L. HAVEN, of the same place.—*Improvement in Millstone Dress.*—Patent dated July 8, 1862.—This "dress" is designed to be applied only to mills with cast-iron grinding surfaces, and it consists of a series of Y-shaped figures arranged one above the other in radial lines from the periphery to nearly midway to the eye; from thence on every alternate radial line of figures, larger sized Y's are formed, making a zigzag passage outwards from the eye of the plate.

Claim.—A mill dress, consisting essentially of a series of graduated Y-shaped figures, arranged radially upon the grinding plate, whether horizontal, vertical, or conical, substantially as and for the purpose set forth.

No. 35,859.—C. W. TROW, of South Reading, Mass., assignor to CYRUS WAKEFIELD, of the same place.—*Improvement in Ratan Machinery.*—Patent dated July 8, 1862.—The object of this invention is to perform the operation of removing the knots or excrescences upon the ratan, the splitting or dividing its surface into separate parts or strands, of dressing and finishing the said strands to the proper form, and of removing them from the core, all successively and continuously in one machine, so that the ratan entering at one end shall issue at the other in strands dressed and finished for use, together with the core which may be used in the manufacture of baskets, &c.

Claim.—The employment, in combination with feeding rollers, of a series of self-adjusting scraping knives, constructed, arranged, and operating as described, to close against the surface of the ratan whatever its diameter may be, and yield to all inequalities other than the knots or excrescences, as set forth.

Also, the angular marking and dressing knives in combination with the feeding mechanism of ratan machinery, substantially as described.

Also, the combination with the knives provided with the dressing, cutting edges of a tubular coring cutter, arranged substantially in the manner and for the purposes set forth.

Also, the combination and arrangement of the apparatus described, performing the several operations of dressing, splitting, coring, and finishing the ratan successively and continuously in one machine, in the manner as set forth.

No. 35,860.—N. W. WILLIAMS, of Frankfort, Pa., assignor through mesne assignment to Himself.—*Improved Lamp Burner.*—Patent dated July 8, 1862.—The object of this invention is to dispense with the glass chimney in coal-oil lamps. The wick-tube which is secured to the cover of the reservoir, and is of greater length than usual, is surrounded by an elongated casing or cap, having its lower end enlarged so as to overhang the cover and admit of a free passage of heated air to the flame. The casing is connected to the wick-tube by means of strips cut from the sides of the cap.

Claim.—First, the exterior casing E with its oblong opening *f*, in combination with the elongated wick-tube D, when so arranged and connected together as to leave an unobstructed opening below for the free admission of air to the chamber between the casing and the tube, as set forth for the purpose specified.

Second, flaring the lower end of the casing E so as to overhang the cover A and permit the gases passing from the reservoir at the point where the cover is secured to the same to pass upward into the chamber P, as set forth.

Third, securing the exterior casing to the wick-tube by means of strips *i* bent from and forming part of said casing, as specified.

No. 35,861.—E. L. WILSON, of Philadelphia, Pa., assignor to C. H. MORGAN, of the same place.—*Picture Envelope.*—Patent dated July 8, 1862.—The object of this invention is to construct an envelope so that an enclosed picture may be seen by simply lifting the seal flap without removing the picture, and thus prevent it from being soiled. The envelope is provided with an opening through one of its sides and a seal flap of sufficient size to cover the opening.

Claim.—An envelope constructed with an opening through one of its sides, in combination with a flap adapted to cover said opening, substantially as set forth.

No. 35,862.—J. R. WEBB, of Jackson, Mich.—*Improved Portable Evaporator for Saccharine Juices.*—Patent dated July 8, 1862.—This apparatus consists of an oblong rectangular box supported upon wheels and extending upwardly at the rear so as to form the front end of another and a shallow box upon which is placed a shallow pan. At the rear end of the main box, beneath the compartments of the finishing pan, are two flues communicating at their front and rear ends with the fire and flues respectively, and so arranged that, by means of a damper, the heat may be shut off from the finishing pan and a current of cold air admitted, by which the contents of the pan are rapidly cooled. A pipe H enters the compartment above the filtering machine, and extends to the front end of the pan. Attached to the evaporating pan are weighted indexes or pendulous arms hung on pivots, for the purpose of levelling the apparatus for operation.

Claim.—First, mounting the evaporating apparatus on wheels, in the manner and for the purpose substantially described.

Second, the flues *h t i b'* and air passage *n*, in combination with the damper *l*, when arranged under the finishing compartment *f g*, in the manner and for the purposes set forth.

Third, the pipe H leading from the filter *r* to the front end of the evaporating pan, in the manner and for the purpose described.

Fourth, the combination of the strips or ribs *n'* attached to the inner sides of the evaporating pan with the partitions *m*, in the manner and for the purpose set forth.

Fifth, the described arrangement of the evaporating finishing and clarifying pans.

Sixth, the combination of the weighted indexes or pendulous arms J with an evaporating apparatus, when arranged in the manner and for the purpose set forth.

No. 35,863.—R. R. MOFFATT, of Lacrosse, Wis., assignor to Himself and HANNAH HORTLEY, of the same place.—*Improvement in Breech-Loading Ordnance.*—Patent dated July 8, 1862.—The breech-pin is formed like the frustum of a cone, its upper end being concave; it forms a part of the breech-piece which is hinged to the rear of the gun. The trunnions have their bearings in a strap which extends back so as to embrace the breech of the gun. The breech of the gun is raised and lowered by means of a lever, and the breech-piece and pin are drawn back by a chain attached to the lever, the breech-piece falling upon the straps. Lugs are cast upon the breech of the gun, having their front sides bevelled to fit in corresponding recesses upon the inside of the strap for the purpose of relieving the trunnions of all strain when the gun is fired, and compensating for their wear.

Claim.—First, in combination with the breech of the gun, the hinged breech-piece and pin and strap B, substantially in the manner described for the purpose specified.

Second, in combination with the lever C and hinged breech-piece, the chain H, substantially in the manner described for the purpose specified.

Third, in combination with the breech-piece of the gun and the strap B, the lugs P and recesses F, substantially in the manner described for the purpose specified.

Fourth, in combination with the breech of the gun and the circular groove *r* in the breech-piece, the shoulder *g*, substantially in the manner described for the purpose specified.

No. 35,864.—ANTHONY B. ALLEN, of New York, N. Y.—*Improvement in Corn Shellers.*—Patent dated July 15, 1862.—This invention relates to the construction of a cast-metal standard, which forms one side of the hopper into which the material is to be fed, and is also designed to sustain the journal-bearings of the moving parts of the machine and support the springs which hold the ears of corn up to the faces of the spur wheel and bevel wheel, while the seed is being removed from the cob.

Claim.—The metallic standard piece A constituting one side of the hopper bearing for spur-wheel C, and for the bevelled balance-wheel, also constituting a support for holding spring I by means of the flanges *a8* and *a9*, whether said standard be made in one or more pieces, substantially in the manner and for the purpose set forth.

No. 35,865.—JOSEPH BATTIN, of Newark, N. J.—*Improvement in Steam Generator.*—Patent dated July 15, 1862.—This invention consists in so arranging and combining the water-feeder of steam generators as to inject the water at the point furthest from where the fire comes in contact with the generator, and applies more particularly to that class of steam generators which are not, properly speaking, water boilers.

Claim.—The steam generator, when constructed and fed substantially in the manner and for the purpose herein above specified.

No. 35,866.—E. S. BLAKE, of Pittsburg, Pa.—*Improvement in Lamp Chimneys.*—Patent dated July 15, 1862.—This invention consists in the employment of several pieces of glass, constituting in whole or in part the shaft of a lamp chimney, so that in case of the breaking of any one of the pieces it may readily be replaced by a new piece. This shaft rests upon a base consisting of a metallic plate perforated at its centre. The top of the chimney shaft is provided with a shield or cover to prevent the flame from being extinguished by currents of air.

Claim.—First, the mode herein described of constructing lamp chimneys; that is to say, making the shaft in whole or in part of several pieces of flat glass, arranged as herein described.

Also, the base constructed to receive the lower ends of flat plates of glass, for the purposes above set forth.

Also, the metallic top, when the same is provided with a base or plate, adapted to receive or form a joint with the upper ends of flat plates of glass, and is designed to be used in combination with such plates, in the manner and for the purposes herein set forth.

Second, a shield for the top of the shaft of a lamp chimney, for the purpose of preventing the extinguishment of the flame by currents of air, as herein described.

No. 35,867.—HARRIS BOARDMAN, of Lancaster, Pa.—*Improvement in Cork-Cutting Machines.*—Patent dated July 15, 1862.—In this machine is employed a cylindrical cutter, the edges of which are so formed as to constitute a series of lance-blade points instead of a smooth, cylindrical edge, by which the necessity of a rimmer or crown saw is obviated. The tool stock, with its long traverse pulley and bearings, is made in the form of a tube, into which the rod R enters, and is rendered adjustable by a set screw upon the top of the standard. This rod is fixed or stationary when adjusted, and expels the cork as the tool is raised for another cut. The tool holding the cutter pulley and bearings is affixed by brackets to a plate which slides up and down in grooves on the standard, and is drawn up by means of a treadle having a chain or rope over a pulley attached thereto.

Claim.—The combined arrangement of the cutter, as described, sliding tool, stock operated by a treadle, adjustable stop E, long traverse pulley P, and adjustable stationary rod R, substantially as and for the purposes herein specified.

No. 35,868.—JEAN RENNY BOUBILLA, of Paris, France.—*Improvement in Seal Locks for Mail Bags.*—Patent dated July 15, 1862.—This lock is composed of a block of brass or other metal so constructed as to receive a cord and seal, and containing a griper, so that when applied to a mail bag or other package and properly secured, the said bag or package cannot be opened without either severing the cord or removing the seal, and thus any attempt at opening the bag may be detected upon its arrival at its destination.

Claim.—The seal lock, composed of the block A, with its passages *a* and *b*, seal cavity *c*, and griper *e e*, substantially as herein specified.

No. 35,869.—NASON BURNHAM, of Norwalk, Ohio.—*Improvement in Spring Balances.*—Patent dated July 15, 1862.—This invention consists in the use of a volute instead of a helical spring, placed within a proper casing and provided with a graduated rod and disk.

Claim.—As a new article of manufacture, a spring balance, in which a volute spring (of the form represented in the drawings) is employed, substantially in the manner herein set forth.

No. 35,870.—JOHN W. CRANNELL, of Springport township, Michigan.—*Improvement in Axles for Vehicles.*—Patent dated July 15, 1862.—This invention consists in providing each end of an ordinary wooden axletree with a cast shoe, at the outer extremity of which, a polygonally-shaped recess is formed to receive a finished metal axle, which is locked by a peculiarly formed nut and washer in such a manner as to be readily secured and adjusted, and also, in connexion with the cap-nut, to effectually prevent the admission of grit to the axle, and serve as a constant means of lubrication.

Claim.—Connecting an iron axle with a wooden axletree by the use of the shank J and collar I, in combination with the shoe B, lock-nut *m*, and washer O, substantially as and for the purposes described.

No. 35,871.—GEORGE H. DODGE, of Camden, N. J.—*Improved Steam Gauge.*—Patent dated July 15, 1862.—This invention consists in the employment of two springs attached to two arms, which are acted upon by the main spring. The two springs are so constructed and applied to the spindle of the pointer as to serve both as a medium for transmitting the motion obtained by the compression of the main spring to the pointer, and as a means of moving the pointer in a contrary direction, towards the zero point of the dial-plate, as the pressure is removed from the main spring, thereby dispensing with the usual independent spring and superseding the use of cog-wheels and chains used in ordinary steam gauges. Attached to the spindle of the pointer is a cam in combination with the aforesaid springs and arms, so arranged that the dial-plate may be graduated by simple measurement instead of the process of ascertaining the proper points for marking the plate by a series of tests.

Claim.—First, the two springs H and H′, attached to the arms B and B′, or their equivalents, constructed, applied to the spindle of the pointer, and operating substantially as herein-before described.

Second, the cam G, on the spindle of the pointer, in combination with the springs H and H′ and the arms B and B′, or their equivalents; the whole being arranged and operating as and for the purpose herein set forth.

No. 35,872.—W. H. ELLIOT, of Plattsburg, N. Y.—*Improvement in Patched Cartridges.*—Patent dated July 15, 1862.—This cartridge is composed of a copper shell combined with a ball formed in moulds and having a shoulder to receive the end of the cartridge shell. After the powder and fulminate have been placed in the shell, the ball, covered with a tubular patch, is placed in its mouth, and the copper of the shell closed tightly around both shot and shell.

Claim.—The combination, in one cartridge, of the shell, ball, patch, powder, and fulminate, as an article of manufacture and trade.

No. 35,873.—MICHAEL GALVIN, of Wilkesbarre, Pa.—*Improvement in Hand-Tenoning Machines.*—Patent dated July 15, 1862.—This machine is designed for cutting tenons on door rails and similar work. It is intended as an improvement upon a machine patented to the said Galvin, March 18, 1862, and consists in providing the device with a movable or adjustable bed, so arranged that the tenon may, by a single adjustment, be cut centrally on the stuff, or at a greater or less distance from either side of the centre as may be desired.

Claim.—The adjustable bottom *i*, arranged to be operated substantially as shown, when used in combination with the box A and plane C, all arranged as and for the purpose specified.

No. 35,874.—L. S. GRAVES, of Rochester, N. Y.—*Improved Dies for Cutting Bevelled Soles for Boots and Shoes.*—Patent dated July 15, 1862.—This invention will be understood from the claim and engraving.

Claim.—The die A, having the edge of its walls bevelled on the inside at *b*, and having the cutting edge *c* outside the said bevel, so that the die will cut a bevelled sole on a plane surface, substantially as herein set forth.

No. 35,875.—G. W. HARROLD, of Rochester, N. Y.—*Improvement in Fountain Lamps.*—Patent dated July 15, 1862.—This invention consists in attaching a globe of glass to a bracket or pipe, through which, burning fluid is made to pass from a reservoir placed in a position higher than the burner, so that by turning a cock a requisite amount of the fluid may always be kept in the globe, which amount the transparency of the globe admits of being readily determined.

Claim.—The induction of illuminating fluid into a transparent fountain lamp, substantially as and for the purposes aforesaid.

No. 35,876.—JOHN HOENIGER, of New York, N. Y.—*Improved Machine for Amalgamating Gold and Silver.*—Patent dated July 15, 1862.—In a circular vessel is fitted, so as to be easily rotated, a block or disk, having a cavity in its upper side into which the ore to be separated is placed. Upon the under side of the rotating block or disk are placed projecting plates.

Claim.—The herein-described machine for amalgamating and separating gold and other precious metals from their ores, consisting of the vessel A, the disk B, in combination with the projecting plates *a a*, all substantially as set forth and described.

No. 35,877.—JOSEPH HURSH, of Philadelphia, Pa.—*Improvement in Arranging Water Tubes for Cooling the Breech of Ordnance.*—Patent dated July 15, 1862.—Surrounding the rear or breech of the gun is a jacket, through the interior of which extend a series of straight tubes surrounding the breech. Through these tubes cold water is passed for the purpose of cooling the gun during rapid firing. At the front end of the jacket is a ring which surrounds the barrel, and forms an annular chamber with which the tubes are connected at their front ends. A ring made hollow on its inside is fitted to the rear of the jacket, and forms a chamber with which the rear ends of the pipes communicate. Within one of the cooling tubes is arranged a sighting tube, leaving a sufficient space for a current of water. The use of cooling tubes in themselves is disclaimed.

Claim.—Constructing the barrel with a series of straight tubes, arranged substantially as described, in relation to the barrel and to the jacket which is cast around it, the tubes being connected with the chambers E and G, or their equivalents.

Also, arranging the sighting tube J in one of the cooling tubes, substantially as described and for the purpose set forth.

No. 35,878.—HENRY KELLOGG, of New Haven, Conn.—*Improvement in Metallic Cartridges.*—Patent dated July 15, 1862.—This invention consists in the construction of a water-proof metallic cartridge, having a projection in the rear so formed from or forming a part of the cartridge case that, when removed by cutting or otherwise, either at or before the instant of discharge, it shall leave an opening through which may pass the flame from a detonating device independent of the cartridge, to cause an explosion of the powder within the cartridge case, the object being to preserve the powder from the atmosphere and the deleterious effects of the fulminate commonly used within the case.

Claim.—Constructing a water-proof metallic cartridge, having the ball, powder, and case combined, without fulminate or percussion powder, as herein described, by making in the rear or closed end, and of one and the same piece of the cartridge case, a projecting nipple, said nipple to be removed by cutting it away at or before the instant of discharge, in the manner and for the purpose substantially as herein set forth.

No. 35,879.—H. J. LOMBAERT, of Philadelphia, Pa.—*Improved Mode of Constructing and Applying Rails to Railroads.*—Patent dated July 15, 1862.—This invention consists in

making the rail, which is similar in shape to the ordinary single bar rail, in two separate parts, termed by the inventor "the wearing and the supporting rail," and connecting them together by means of intermediate blocks or plates in combination with clamping hooks, arranged and secured at equal distances apart from each other and in certain relation to the position of the cross-ties, to which the rails are secured.

Claim.—First, a compound rail for railroads consisting of the two parts A and B, the intermediating blocks or plates C, and the clamping hooks D D′, the same being arranged and combined together in relation to each other and to the positions of the supporting cross ties or ground sills, substantially as described and set forth for the purposes specified.

Second, securing the joint which occurs at the abutting or contiguous ends of the wearing rails A by means of an intermediating plate C2, arranged midway between the adjacent cross ties or ground sills and directly beneath the said joint, the said plate being rigidly clamped between the rail B and the ends of the rails A, all substantially in the manner described and set forth.

Third, making the supporting rail B to have the nearly vertical planes *b5* *b5* along its recessed sides, and the bevelled edges *b2* *b2* projecting therefrom, substantially as described and set forth for the purposes specified.

Fourth, making the said supporting rail B to have the central series of both holes *b3*, arranged at the equal distances apart described and set forth, for the purpose specified.

Fifth, making the said supporting rail B to have the series of protuberances *b′*, or their equivalents, arranged at the equal distances apart described, and also in the relation to the bolt holes *b3* described, for the purposes specified.

No. 35,880.—A. J. Low, of German Township, Pa.—*Improved Portable Apparatus for Evaporating Saccharine Juices.*—Patent dated July 15, 1862.—The evaporating pan is divided into several compartments, in the front one of which is an inclined plane connected at its upper part with a trough extending the width of the pan. From the lower end of this trough, where it is covered with a strainer, a pipe leads into the front compartment or receiver. The tongue or draught pole is secured to a socket at the rear end of the furnace, and through the tongue and socket passes a screw, provided at its lower end with a swivel foot and at its upper end with a screw, by means of which the rear end of the furnace may be raised or lowered and the inclination of the evaporating pan varied as may be desired.

Claim.—First, the receiver K, inclined plane J, in combination with the trough *e*, strainer *g*, and pipe *f*, when arranged to operate in the manner and for the purpose set forth.

Second, the screw F, winch H, and swivelled foot G, in combination with the evaporating pan I and wheels B B, when arranged to operate in the manner specified.

No. 35,881.—Michael Madden, of St. Louis, Mo.—*Improvement in Retainers for Hydraulic Presses.*—Patent dated July 15, 1862.—This machine is designed for retaining tobacco or other substance, which has been pressed under a hydraulic or other press, in the position to which it has been forced, by means of toggle rods, which connect the base with the retaining plate and are operated by a right and left screw. The upper ends of the toggle rods are joined to keys which pass through corresponding holes in the retaining plate in which they are adjusted, as required, by means of pins.

Claim.—The toggle rods C C, when the same are used in combination with the movable top B and movable keys F F, as set forth in the specification and shown in the drawing.

No. 35,882.—G. T. May, of Tompkinsville, N. Y.—*Improved Masts and Rigging.*—Patent dated July 15, 1862.—This invention is designed as an improvement upon the system of masts and rigging patented to the said May on the 28th of April, 1857, and the invention consists in substituting for the doubled upper masts and rigging of the original invention, a single spar and a simplified arrangement of rigging and fittings thereto, the double lower masts being retained and the substitute spar and rigging being adapted to them.

Claim.—The use, in combination with the lower mast *a*, the pivot mast *b*, the bridge with hounds and clamps *c*, and the lower rigging *d* and *e*, of the following-named specified parts: the upper mast *f*, the top-mast forward stays *g*, the top-mast back stays *h*, the top-mast breast rigging *i*, the forward out-riggers *j j′*, the back out-riggers *k k′*, the collar *l*, the ridge lines D′ D″ D‴ D⁗ D⁗′, the top-gallant forward stays *m*, the top-gallant back stays *n*, and the top-gallant breast shrouds *o′*, substantially as described and for the purpose set forth.

Also, inc ombination with the above, the gaff top-sailjack stay *s*, the bull's eye D, the guess rope F F, the thimble M, the lanyards I, and the rings J, substantially as and for the purpose set forth.

Also, in combination with all the above, the mast rope *p*, the mast downhaul *q*, and the step *r*, substantially as and for the purpose specified.

No. 35,883.—W. H. McNary, of Brooklyn, N. Y.—*Improvement in Converting Motion.*—Patent dated July 15, 1862.—This invention consists in certain means applied in combination with a driving shaft rotating continuously in one direction, whereby the said shaft may be made to impart rotary motion to machinery either in one direction or the other, and to reverse the direction automatically at such intervals of time, however irregular, as may be desired

Claim.—The employment, in combination with a switch wheel, or other equivalent device carried by a driving shaft, of a gear B and toothed wheel I, the said gear carrying pins G G, controlled by springs, and the said toothed wheel being furnished with wedges *s s*, or other inclined surfaces of similar character, and the said gear and toothed wheel being connected by a pinion J, or its equivalent, actuated by a fixed tooth *t*, the whole combined and applied to operate upon the reversing lever E, or other device for reversing the motion, substantially as herein specified.

No. 35,884.—James Milholland, of Reading, Pa.—*Improvement in Apparatus for Casting Ordnance.*—Patent dated July 15, 1862.—In the inside of the hub of a bevel wheel, which has its bearings in a central opening in the cross piece attached to a cylindrical casing, are cut four or any convenient number of vertical slots or recesses for the reception of a like number of keys or feathers on the upper end of the tapering tube D, so that while the latter revolves with the wheel it can have a limited vertical movement. The lower end of the tube D is provided with a flange secured to a flange in the hollow base, which forms a continuation of the tube, the lower end of the hollow base having a flange secured to a plate, from the under side of which projects a journal adapted to a step secured to the bottom of the cylindrical casing.

Claim.—First, so constructing the upper end of the tube D, in respect to the gearing for driving the same, that the said tube can expand and contract without any interruption of its rotary movement.

Second, combining the aforesaid tube D and its hollow base with the water-tight casing A, substantially as and for the purpose herein set forth.

No. 35,885.—G. H. Mills and J. M. Hanscom, of Boston, Mass.—*Improvement in Hammers.*—Patent dated July 15, 1862.—The hammer is provided at one side with a taper socket or groove, so arranged as to hold a nail and admit of the sticking of the same into the wood preparatory to driving it, and the ready detachment of the hammer from the nail when struck, the object being to obviate the necessity of holding the nail with the fingers while the nail is being struck.

Claim.—A hammer provided with a taper groove C at its side, to receive and hold a nail for the purpose of sticking the same, without the aid of the fingers, preparatory to driving it, as herein set forth.

No. 35,886.—E. R. Morrison, of New York, N. Y.—*Improvement in Automatic Apparatus for Walking Figures.*—Patent dated July 15, 1862.—In this device the power to be applied to the stepping movements is transmitted through the aid of a pinion wheel and shaft D, on the ends of which, outside of the bearings, are two eccentric cams, having fitted upon them at each side of the figure, the walking mechanism, consisting of the leg and foot and two vertical oscillating levers B C, having at the knee or hip-joint round holes in which the cams fit so as to turn freely, one cam partly lapping over the other so that by the motion of the supporting slide lever C and vertical walking lever B, to which the leg and foot are attached, they are caused to alternately change their position. The foot has a slight oscillating motion, produced by the action of an eccentric pin in one of the cams which works in a slit at the joint.

Claim.—First, the double eccentric cam joints *c e*, in combination with the levers B C, which give alternate reciprocating movements to the pedal extremities for walking figures, in the manner as and for the purposes specified.

Second, the automatic stepping movement, consisting of the shaft D, the cams *c e*, pin *i*, vertical levers B C, and foot A, in combination with clockwork, substantially as and for the purpose herein described.

No. 35,887.—M. D. Myers, of Ilion, N. Y.—*Improvement in Hay Elevators.*—Patent dated July 15, 1862.—This invention consists in so arranging the tripping cord and belt within the tongue, and in relation to the head of the elevator, as to prevent the bolt from being accidentally drawn by contact with the hay mow or beams of the barn as it is dragged along. In order to prevent injury to the cord as it passes from the head, and to facilitate its action upon the bolt, use is made of pulleys and a guide placed within the lower part of the head.

Claim.—First, arranging the tripping cord and bolt in relation to the tongue and head, as and for the purpose herein set forth.

Second, the employment of pulleys *i*, in combination with cord *f*, when the cord passes through a head which turns upon its axis when the hay is discharged, as and for the purpose specified.

No. 35,888.—George Palmer, of Littlestown, Pa.—*Improvement in Pumps.*—Patent dated July 15, 1862.—This pump is constructed with its cavities in the upper part and the section down to the valves, considerably larger than that of the tube or bore below. To the plunger E is attached a wooden float or buoy, which acts as a counterbalance to the plunger. Upon the top of the piston rod is a link or toggle joint by which it is connected to the pump handle, the latter having a series of holes in it in which a pin is fitted so as to admit of the length of the stroke of the piston being varied. Under the axle of the handle is placed a spring or bumper so as to cause the handle to react after its downward movement.

Claim.—The internal arrangement, consisting of the enlarged cavities or water space above the valves, in combination with the buoy or float H acting upon the plunger E, the stationary cap valve *x y z*, the adjustable toggle joint *m*, connecting with the pump handle L and the bumper *r*, all constructed and arranged substantially in the manner herein specified.

No. 35,889.—W. R. PEAVEY and H. M. PEAVEY, of Swanville, Maine.—*Improvement in Hay Press.*—Patent dated July 15, 1862.—The novelty of this invention consists in the arrangement and combination of parts designated in the claim.

Claim.—The arrangement and combination of the windlass G, the two leading ropes F' F', the two scroll wheels E E', their shafts D D', the grooved cone pulleys C C C' C', and the platen-supporting ropes *b b b b*, as set forth, the whole being for the purpose of operating the platen, as explained.

Also, combining the windlass with the press box, by means of the foot strut and the two braces, arranged as specified.

No. 35,890.—S. T. W. POTTER, of Scott, N. Y.—*Improved Subsoil Plough.*—Patent dated July 15, 1862.—This invention consists in constructing the mould-board of the plough in the form of a curved inclined plane with a vertical ledge or guard at its landside edge, whereby the plough, as it is drawn along in the furrow previously made by the surface plough, will take up the subsoil and deposit it on the furrow slice turned by the surface plough, so that the field when ploughed will have the subsoil brought to the surface for subsequent tillage.

Claim.—The inclined curved mould-board and share, provided with the ledge or guard, arranged substantially as and for the purpose herein shown and described.

No. 35,891.—GEORGE RACE, of Norwich, N. Y.—*Improvement in Water Elevators.*—Patent dated July 15, 1862.—This invention consists in the employment of a ratchet placed loosely on the windlass shaft, in connexion with a wheel permanently attached to the windlass shaft, and enclosed within a barrel attached to the ratchet; the said wheel being actuated by a friction band or clutch so arranged as to be operated at pleasure, by means of a ratchet lever to which the handle is attached through a cogged wheel and pinion, whereby the bucket may be elevated by rotating the crank and released at the same time or suddenly stopped, its descent being under the perfect control of the operator.

Claim.—First, a hollow crank having a ratchet wheel permanently attached thereto, as described.

Second, the loose friction band or clutch having projections and stops, substantially as set forth and operated by means of a ratchet lever.

Third, the ratchet lever, constructed as described and operated by means of the pinion S, or its equivalent, and arranged with reference to the spring D and thumb-screw F, as described.

No. 35,892.—B. H. REECE, of Marion, Iowa.—*Improvement in Beehives.*—Patent dated July 15, 1862.—The movable frames which hold the comb are loosely dovetailed into a cross-piece at the upper part of the hive so as to be readily removed. At the bottom of the stand is a funnel-shaped moth slide made of metal and perforated to admit of the circulation of air; its upper end penetrates a hole made for its admission, and it may be raised upon a stem passing through its centre to exclude the moth or lowered to admit the bee.

Claim.—First, supporting or hanging the movable frames *a a a* by means of dovetails, in order that they may be easily and expeditiously removed without irritating the bees, substantially in the manner set forth.

Second, the moth slide *d*, when employed in conjunction with frames *a a a* and movable glass door *b*, the whole being constructed and arranged in the manner and for the purpose specified.

No. 35,893.—E. B. REQUA, of Jersey City, N. J.—*Improvement in Lamp Burners.*—Patent dated July 15, 1862.—The wick tube is made flat and straight at its upper part, its lower part being bent and made in a semicircular form in its horizontal section, by which a much wider wick than usual can be used in a tube of a given size and a proportionately wider flame obtained.

The wick is raised and lowered by means of a shaft upon the crank of which is fitted a rod having a fork upon its upper end composed of two or more tines, which pass through slots in the wick tube, and are pressed into the wick by a spring.

Claim.—First, bending or curving the lower part of the wick tube B in semicircular form in its horizontal section, as and for the purpose set forth.

Second, operating or raising and lowering the wick *k*, through the medium of the crank shaft E, fork G, and rod F, provided with the spring *l*, substantially as described.

No. 35,894.—JAMES RICHMOND, of Lockport, N. Y.—*Improvement in Machines for Dressing Millstones.*—Patent dated July 15, 1862.—This invention consists in the employment of a guide bed, in connexion with an adjustable stock or holder of the diamond used in cutting down the inequalities of the millstone, in such a manner that the diamond may be caused at all times to cut truly on the stone. In connexion with the guide bed is a platform provided with a suitable arrangement for giving a variable feed to the bed, and at the same time allowing the latter to adapt itself perfectly to the surface which is being dressed.

Claim.—The guide bed B, with plane parallel surfaces *h h*, and provided with a slot L, in combination with the adjustable diamond shank M and its slide N, arranged and operating substantially as and for the purpose herein described.

Also, the guide bed B, connected with the stationary platform A by means of the screw C, or its equivalent, operated by means of the nut E and lever I, provided with a pawl *b*, or their equivalents, and gauged by means of the adjustable pins *d d*, arranged and operating substantially as and for the purposes herein set forth.

No. 35,895.—WILLIAM RUMBOLD, of St. Louis, Mo.—*Improved Construction of the Defensive Armor of Ships.*—Patent dated July 15, 1862.—In the construction of this device a number of wrought-iron beams, A, having flanges on both sides and curved to the contour of the desired structure, are placed vertically upon a circular base, in close proximity to each other but not in contact. Between these beams are placed other wrought-iron beams, C, which are curved and shaped to correspond with the flanged portions of the beams A. The upper and lower ends of the two sets of beams abut against circular frames, and they are tied together by means of cylindrical bands, E, placed around the skeleton dome, which, as thus constructed, is supported and held together without the aid of through bolts.

Claim.—First, so forming and arranging relatively to one another metal beams, A C, that the force of a cannon ball or other force is transmitted in an indirect line from the point of contact, substantially in manner and for the purpose set forth.

Second, The combination of the beams A C and tie bands E E, the whole constructed and applied together, substantially in the manner and for the purpose described.

No. 35,896.—G. S. RUST, of Chester, Ill.—*Improvement in Expressing the Juice of Apples, Grapes, &c.*—Patent dated July 15, 1862.—This invention consists in the employment of a roller composed of strong solid heads and wire gauze or perforated metal covering. Between the head, at suitable distances apart, are placed bars so as to form an open or grated cylinder, and the wire gauze is fitted closely around the circle of bars, by which means a hollow perforated expressing roller is formed, to be used instead of the usual solid cylinder, and the pomace, &c., thereby separated from the juice, during the expressing operation.

Claim.—Expressing and separating juices, oils and fluids, from the substances which contain the same, by employing in an organization, substantially as described, a pressing cylinder whose periphery is perforated or constructed of open work, and whose body is hollow, substantially as and for the purposes set forth.

No. 35,897.—J. P. SCHENKL, of Boston, Mass.—*Improvement in Time and Concussion Fuzes for Shells.*—Patent dated July 15, 1862.—This invention is designed not only to combine a percussion apparatus with a time fuze, but with a mechanism by which the period of burning of the fuze may be regulated or adjusted as circumstances may require. The nature of the invention will be understood from the claim.

Claim.—A rotary fuze having its covering or case, whether made of paper or other suitable material, provided with a series of holes so arranged that each, by a suitable movement of the fuze case, may be brought into conjunction with some one of another series of holes made in the fuze plug; the requisite motion of the fuze within its plug being affected by a fuze rotator, and the fuze being provided with an igniting apparatus, all substantially as specified.

Also, the combination of the wrench pin E with the percussion striker, the rotator and its latch spring.

Also, the combination of one or more vent holes *o o* and a closing annulus *n*, or its equivalent, with the rotary fuze holder and fuze when combined with the rotator and a percussion apparatus, substantially as described.

Also, the arrangement of the perforations in the rotary fuze and its holder, viz., in two semihelices or parts of helices pitched in opposite directions in the fuze and its holder, substantially as explained.

Also, a rotary fuze and its holder, made with perforations *r s* arranged as described, and also with a scale and index so applied as to enable the fuze to be adjusted so as to bring any one of its holes of its range *s* to open into a hole of the range *r* of the fuze holder.

Also, the combination of the latching apparatus *u* and the series of recesses *t t* with the scale of the holder B, when said holder is combined with a rotary fuze, and both are provided with ranges of holes, as specified.

No. 35,898.—J. R. and J. A. SHEPPARD, of Waukegan, Ill.—*Improved Window Clothes Dryer.*—Patent dated July 15, 1862.—This invention consists in the employment of a revolving reel suspended from a slide that rests upon a V-shaped support extending horizontally from the window, the reel being so arranged that its arms can be turned one upon the other when the reel is not used, and by turning them in a position at right angles to each other they will become locked and retained in their position.

Claim.—First, the employment or use of a revolving clothes dryer or reel B, when the same is secured to a window C, substantially in the manner and for the purpose shown and described.

Second, the arrangement of the V-shaped support A and looped wire *d* in combination with the reel B, as and for the purpose specified.

Third, the sliding carriage D, in combination with the support A and reel B, constructed and operating substantially as shown and described.

Fourth, the latch *j*, arranged in combination with the slotted plate *i*, raised part *j'*, and pivot *g'*, of the rack B, substantially in the manner and for the purpose set forth.

No. 35,899.—DARIUS SKIDMORE, of Seneca Falls, N. Y.—*Improved Mode of Fastening Door Knobs to their Spindles.*—Patent dated July 15, 1862.—This invention consists in securing the shank and spindle of a door knob together, by providing the cylindrical shank with a closely fitting sleeve, having on its inner end a rose or flange forming a part of it, and secured to the door by screws. This sleeve has a hole on the same plane in cross section with the hole in which the coupling pin fits, and the pin being placed in the hole, the sleeve is turned on the shank and covers the pin, thus preventing it from being in any way accidentally detached.

Claim.—The sleeve D, provided with a hole *d*, either forming a part of or detached from the rose E, when the same is used in connexion with the shank B, for holding the coupling pin in place, arranged substantially as herein described.

No. 35,900.—J. J. SPEED, of Gorham, Maine, and F. B. SMITH, of Brooklyn, N. Y.—*Improvement in Treating Ardent Spirits.*—Patent dated July 15, 1862.—The apparatus used in carrying out this invention consists in the combination of a steam engine, or other power, an air pump, a tight vat or cask to contain the liquor to be rectified, and three or more like vats or casks of smaller size to contain water, together with a series of tubes to conduct the air from one to the other, until it escapes from the last of the series into the open atmosphere.

Claim.—The use and forcing of atmospheric air, hot or cold, into and through ardent spirits; also, in combination with said process, the arresting in water, and saving for use, the alcohol which combines with the air, in the manner and by the combination of apparatus substantially as described above.

No. 35,901.—J. W. STREET, of Salem, Ohio.—*Improvement in Harvesters.*—Patent dated July 15, 1862.—Upon each end of the main shaft is a box, one or both of which may be provided with pivoted pawls, which, when motion is to be communicated to the cutting apparatus, are held in or out of gear with ratchet teeth on the face of the wheel hub by means of an elastic lever fulcrumed upon the shaft, and arranged to bear against either end of the pawls as desired, by which means motion is communicated to the shaft to operate the cutting apparatus. Upon the shaft C is keyed a gear wheel which meshes with a pinion G, secured upon a sleeve that turns upon a secondary shaft H, journalled transversely in the forward part of the main frame. To the shaft H is attached a drag frame. The finger bar is secured by a horizontal hinge to a plate which is attached by a diagonal hinge to the outer face of a flange projecting downward from the outer rear corner of the drag frame.

Claim.—First, the lever E, elastic or otherwise, fulcrumed upon the shaft C, and projecting on each side of the box D, for the purpose of throwing the pawls *d d* in and out of gear, substantially as explained.

Second, mounting the two independently and separately cast intermediate gear wheels G and G' upon a common sleeve *g*, which sleeve is journalled upon the shaft H, which hinges the drag frame to the main frame A.

Third, the drag frame I I' I'' J J', constructed and employed in the manner and for the purposes described.

Fourth, attaching the finger bar by a diagonal hinge *l'*, on either a perpendicular or horizontal side of the drag frame, shoe or finger bar, with or without the horizontal hinge *l*, to admit of folding the bar for transportation, substantially as described.

No. 35,902.—B. F. STURTEVANT, of Boston, Mass.—*Improved Preparation of Shoe Pegs.*—Patent dated July 15, 1862.—This invention consists in the use of one or more bands or strips of paper or its equivalent, and a series of shoe nails, or pegs, arranged in close proximity, edge to edge, and cemented on one or the two opposite sides of each peg to the said strips, by which means a flexible joint is obtained that can be easily broken when necessary.

Claim.—As a new manufacture, shoe nails or pegs and paper, or its equivalent, arranged and combined, substantially in manner and for the purpose as set forth.

No. 35,903.—P. C. VAN BROCKLIN, of Buffalo, N. Y.—*Improvement in Converting Rotary into Reciprocating Motion.*—Patent dated July 15, 1862.—This invention consists in a method of converting rotary into reciprocating motion, by the use of two toothed wheels revolving in opposite directions, and acting directly upon the part to be moved, without the intervention of a connecting rod or levers. In connexion with the toothed wheels is a spring which serves to react upon the projectile force of the reciprocating body at each extremity of its movement.

Claim.—First, the toothed wheels A and B, so arranged as to revolve in opposite directions, and act directly upon the part to be reciprocated, without the intermediate use of connecting rod or levers, substantially as herein set forth.

Second, the combination of the spring K with said toothed wheels and reciprocating bar, for the purposes and substantially as described.

No. 35,904.—THOMAS VARNEY, of San Francisco, Cal.—*Improved Amalgamatory Machine for Gold and Silver.*—Patent dated July 15, 1862.—This apparatus is composed of a stationary cast-iron plate A, provided with radial recesses or grooves on its under side and fitted securely within a circular pan. Resting upon the plate A is another cast-iron plate C fitted upon a vertical arbor, and having a tube at its centre, which is encompassed by a concentric flanch; the face side of the plate C is provided with grooves or recesses. Upon a flanch at the upper edge of the pan is a cap H formed of a circular plate, and provided with an annular flanch projecting downwards within the flanch of the revolving plate C. The cap H is also provided with a feed spout and discharge spout communicating with the space within the flanch upon the revolving plate.

Claim.—The two plates A C, fitted in the pan or chamber B, provided respectively with grooves *a d*, and used in connexion with the cap H, provided with the feed and discharge spouts I J and flanch *f*, all arranged to operate with ore pulp under pressure, substantially as and for the purpose set forth.

No. 35,905.—G. W. WALKER, of Boston, Mass.—*Improvement in Cooking Stoves.*—Patent dated July 15, 1862.—In this range the fire-box is suspended within the oven and extends transversely across the same. The oven extends underneath and on both sides of the fire-box, and is provided with one or more register plates extending horizontally between the sides of the oven and the fire-box for the purpose of regulating the heat and equalizing the same upon the upper and under surface of the articles to be cooked. An induction pipe M serves to convey the heated air from a hot-air chamber, which is arranged under the bottom flues of the oven to the upper part of the same. Near the lower part of the oven is arranged the mouth of a flue, for the purpose of creating a draught and drawing away the less heated air of the oven.

Claim.—My improved range or stove, having its fire-box B, its oven I I, flue R, hot-air chamber N, induction flue M, eduction flue O, and register L, constructed and arranged in relation to each other, and to operate in manner as set forth.

Also, the flue R, as made to extend around the top, the bottom, and the two ends of the oven, and also a portion S of the rear part thereof, the same being as and for the purpose specified.

Also, the application or arrangement of a register or register-plate L to one or both spaces between the fire-box and the flue R, in manner and for the purpose set forth.

No. 35,906.—J. M. WHITING, of Providence, R. I.—*Improvement in Machines for Shaving and Nicking the Heads of Wood Screws.*—Patent dated July 15, 1862.—This invention is designed to operate upon two blanks at once, and to that end the machine is provided with two spindles for revolving the said blanks, and with two sets of machinery for performing the successive operation upon the blanks, (one to each spindle,) the mode of operation admitting, the inventor says, of two spindles being employed conjointly, with greater economy in many respects than singly and independently of each other. Reference to the description and drawings will be necessary for an understanding of the construction and operation of the invention.

Claim.—First, the combination and arrangement of the sliding sleeves S S, the toggle joint *s s s*, the plunger *d*, cam *f*, substantially as described for the purpose specified.

Second, the sliding bars *h h*, in combination with the fixed posts 4 4, for operating the back rests *e e*, substantially as specified.

Third, the employment of the toggle joint *s s s*, for the twofold purpose of operating the jaws of the nippers, which seize and hold the blank to be operated upon, and for operating the back rests *e e*, which support the blanks therein while being operated upon, substantially as specified.

Fourth, the combination and arrangement of the toggle joint *y y y*, the plunger *x*, the lever *q*, the cam *z*, and the spring P4, substantially as described for the purpose specified.

Fifth, the combination and arrangement of the friction clutch D2, the pulley H2, the shifting levers N, and the spindles A A, with a suitable belt or band for communicating motion to the said spindle, the same operating substantially as described for the purpose specified.

Sixth, the combination and arrangement of the pin *x2*, the lever *r2*, the sliding piston actuated by the spring P2, and their connexions, the latch *t*, the catch *z1*, and the fixed post *f3*, for inserting the blank in the jaws of the nippers simultaneously with its arrival in the proper position to be received by said jaws, substantially as specified, and in combination therewith the finger V2 and the stud *d3*, upon the sliding piston, for the purpose of placing the pin *x2* in the proper position to operate upon the succeeding blank, substantially as specified.

Seventh, the combination and arrangement of the railway F', constructed and arranged as described, the revolving cylinder *k'*, the flat springs *m2 m2*, and the barrel *a2*, for the purpose specified, in connexion with a suitable device for inserting the blanks in the jaws of the nippers, substantially as specified.

Eighth, the tumbler R2, arranged and operating in connexion with the railway F', substantially as specified.

No. 35,907.—RICHARD YEILDING, of Ypsilanti, Mich.—*Improvement in Corn Harvesters.*—Patent dated July 15, 1862.—This machine is designed for harvesting standing corn and depositing the same on the ground in gavels of suitable size in rows parallel with each other, so as to be convenient for removal into a wagon. As the machine is moved along between the rows, sliding bars E on each side of the machine are thrust forward by their actuating mechanism, and a pivoted arm coming in contact with the stalk, and being resisted thereby, shuts until the bar is passed far enough in advance to allow it to slip behind the stalk, when it commences to move in the opposite direction, and by means of a curved arm drawing the top of the stalk between the pivoted bars on the inner side, sufficiently to allow them to slip by, they open and hold the stalk from being pushed forward by the action of the knives in cutting. After being clipped off the stalk falls over backward into the rack upon the sliding bars, where they remain until a sufficient quantity has been gathered to form a suitably sized gavel, when, by a movement of the lever in one direction, the sliding bars are moved inward and the gavel is allowed to fall to the ground.

Claim.—The combination of the reciprocating sliding bars E, and pivoted arms X, with the pivoted arms W, and rotating knives J K, arranged to operate in the manner and for the purpose set forth.

Second, the sliding bars A A′, pinions *i o*, rack C, pitman *n*, and hand lever D, when combined and arranged to operate in the manner and for the purpose set forth.

No. 35,908.—ALEXANDER DOUGLAS, of English Neighborhood, N. J., assignor to Himself and S. S. Sherwood, of Acquackanonck, N. J.—*Improvement in Store Trucks.*—Patent dated July 15, 1862.—This invention consists in the combination of a toothed wheel upon the inside of and forming a part of each wheel of the truck, and a bar or pawl running through the body of the truck and reaching far enough over the face of the toothed wheels to mesh into them, when it is pressed down by the foot and the wheels thus effectually blocked. The pawl is held back by a spring when not in use.

Claim.—The combination with the store truck of the break bars 7, or its equivalent, by which the rotation of the wheels is prevented at the time of loading the truck, when the said break bar is so arranged in relation to the other parts of the truck as to be easily accessible to the foot of the operator, substantially as herein set forth.

No. 35,909.—J. H. GAREL, of Philadelphia, Pa., assignor to Himself and J. B. Thompson, of the same place.—*Improvement in City Railway Trucks.*—Patent dated July 15, 1862.—The upper surface of the rails is formed of two longitudinal planes, one being horizontal or nearly so, and the other slightly inclined, so as to form an obtuse angle with each other in their transverse section. The car wheels are without flanges, and their treads are made to correspond with the surface of the rails, which latter are laid on a level with the surface of the road or street.

Claim.—The combination of the rails A with the wheels B, when constructed respectively with planes *a b*, and treads formed of two surfaces *c d*, substantially as and for the purpose herein set forth.

No. 35,910.—S. P. ROWELL, of Melrose, Mass., assignor to Himself and A. Chipman, of Boston, Mass.—*Improved Clothes Wringer.*—Patent dated July 15, 1862.—This invention relates to a means of adjusting the spring or pressure bar of the upper or yielding roller, and consists in providing the lower end of the operating lever with three sides, each at different distances from the fulcrum pin, so that either side can be brought to bear at pleasure upon the pressure bar. The rollers are formed by placing four segmental pieces of wood in longitudinal spaces upon the metal shafts, as shown in the engraving. These segments are covered by cloth properly secured, and the whole is encompassed by an India-rubber tube secured by cement, the object being to prevent the India-rubber from turning on the shaft.

Claim.—First, the cam F provided with a plurality of sides 1, 2, and 3, at different distances from the fulcrum pin *d* of the lever G, to which the cam is detached, in combination with the bar D and pressure rollers B B′, and with or without the spring E, all arranged for joint operation as and for the purpose herein set forth.

Second, constructing the rollers B B′ of wooden segments *g*, applied to the shafts *f*, covered with cloth *h*, secured by the bands *i*, and covered with the rubber tube H, substantially as described.

No. 35,911.—G. P. TOWLE, of Boston, Mass., assignor to Himself and R. H. Spaulding, of the same place.—*Improved Clothes Wringer.*—Patent dated July 15, 1862.—In the upper part of the posts which sustain the roller shafts, are bored holes extending from the top to the journals of the upper roll. Within these holes and resting upon the journals of the rolls are pins which support a wooden spring on their upper ends. This spring is actuated by a cam lever, by which the degree of pressure upon the upper roll is readily adjusted.

Claim.—The arrangement and combination in a clothes wringer or presser, as shown and described, of the yielding surface roll *c*, the bearing pins *e*, the wooden spring *f*, the link *b*, and the cam lever *g*, all operating together as set forth.

No. 35,912.—LUCIUS WOODRUFF, of New Britain, Mass., assignor to the Russell & Erwin Manufacturing Company, of the same place.—*Improvement in Locks.*—Patent dated July 15, 1862.—This invention relates to that class of locks which are provided with reversible latch or catch bolts to admit of the lock being applied to a right or left hand door without the necessity of its being inverted. The back part of the latch or catch bolt is provided with two arms, which are parallel with each other, but in different planes, and the knob arbor is provided with two projections or lugs corresponding with the position of the arms on the latch or catch bolt, the ends of the arms of the latter having projections for the lugs of the arbor hub to act against, whereby the latch or catch bolt, and also the hub, may be reversed in position within the lock so as to adjust the position of the bevel of the latch or catch bolt to suit the door.

Claim.—The parallel arms *e′ e′* of the latch or catch bolt C placed out of line with each other or in different planes, in combination with the lugs *h h* of the hub D also placed out of line with each other or in different planes, and arranged relatively with the arms *e′ e′* and projections *g g* thereof to admit of the reversing of the latch or catch bolt C in the case A, for the purpose specified.

No. 35,913.—J. A. HOTCHKISS, of Pleasant Township, Ind.—*Improvement in Hay and Cotton Press, &c.*—Patent dated July 15, 1862.—The nature of this invention will be understood by reference to the claim and engraving.

Claim.—First, the combination of the bar L passing through slots or their equivalents in the end of the chest with the levers G G and arms H H, operating the ram or follower F, substantially as described.

Second, actuating the levers G G by the shaft I through the instrumentality of the roller K K′, substantially in the manner set forth.

Third, actuating the follower F as a ram or pounder by means of the shaft I and drum C, substantially as and for the purpose set forth.

No. 35,914.—JAMES ARMSTRONG, Jr., of Elmira, Ill.—*Improvement in Corn Planters.*—Patent dated July 22, 1862.—This invention consists in the arrangement of an oscillating valve working under a double-channelled tube and between the openings of said tube, and a stationary platform, in such a manner that by means of the said valve, the seed dropping down through one branch of the twin tube is retained on the platform, while, at the same time, the seed deposited upon the said platform, through the other branch of the twin tube, is swept off and deposited in the furrow. In combination with inclined cutters are hinged adjustable runners and shoes, which serve to open the furrows in such a manner that the depth of the furrows can be regulated at pleasure.

Claim.—First, the arrangement of the oscillating valve H′, and platform *n*, in combination with the two channels *m* of the discharge tube G, and with the seed-distributing mechanism, constructed and operating as and for the purpose shown and described.

Second, the arrangement of the hinged, adjustable runners H, secondary frame D, and lever J, in combination with the cutters I and shoes I′, constructed and operating as and for the purpose specified.

No. 35,915.—J. K. BAER, of Highland, Ill.—*Improvement in the Manufacture of Domestic Wines.*—Patent dated July 22, 1862.—This invention consists in the employment of honey dissolved in pure water and introduced into the juice which is to be converted into wine as a ferment, or in augmentation of the fermentable and fermenting substances, for the purpose of producing a large quantity of wine from the juice of grapes, berries, fruits, or vegetable substances.

Claim.—The within described process of manufacturing wine by treating the diluted juice of vegetable substances, such as specified, with honey, substantially in the manner set forth.

No. 35,916.—H. H. BEACH, of Philadelphia, Pa.—*Improved Device for Spreading Grain.*—Patent dated July 22, 1862.—This invention consists in spreading the grain by causing it to pass from a primary channel or receiver, down a series of inclined radial channels, increasing in width from the said receiver to the end of the channels; the bottom of each chamber being inclined outwardly from the inner edges so as to prevent the grain from crowding into the inner corners, and to cause it to be spread evenly throughout the width of each channel.

Claim.—Spreading grain by causing it to pass from a primary channel or receiver down a series of radial inclined channels, increasing in width from the primary channel to the point where the series of channels terminate, when the bottom of each channel is formed in the manner described for the purpose specified.

No. 35,917.—G. P. BERTRAND, of Easton, Pa.—*Improved Mirror for Attachment to a Window, &c.*—Patent dated July 22, 1862.—The mirror is suspended by means of a loop from a projecting rod, which is provided with an arm fitting the said loop so that the mirror can easily be removed. The inner end of the rod forms a plug fitting in a socket, and by means of nuts and stops, the mirror is allowed a horizontal and vertical movement, and prevented from slipping off the rod.

Claim.—A revolving mirror A, hung upon a rod B, with plugs *c d*, nuts *f j*, and stops *i*, as and for the purpose shown and described.

No. 35,918.—SAMUEL BOORN, of Lowell, Mass.—*Improvement in Looms.*—Patent dated July 22, 1862.—Within the body of a metallic case is formed a socket for the reception of an elastic cushion. The case is provided with a wide notch or recess for the purpose of allowing the cushion to expand laterally and preventing injury to the neck of the picker. Through the rear part of the case are two rectangular slots for the reception, respectively, of the two end portions of a band or strap for securing together and in place the component parts of the cushion.

Claim.—My improved loom picker cushion case as made with a notch or recess *b*, arranged with reference to its cushion, and for reception of the picker or picker staff, in manner and for the purpose substantially as specified.

Also, the cushion case, as provided, or made with the loop slots extending through its bottom or rear part and out of its cushion chamber, in manner and for the purpose as described.

No. 35,919.—GAIL BORDEN, Jr., of Amenia, N. Y.—*Improvement in Concentrating and Preserving for use Cider and other Juices of Fruits.*—Patent dated July 22, 1862.—The nature of this invention is explained by the claim.

Claim.—As a new article of manufacture or merchandise, the juice of apples, grapes, currants or any other fruits from which vinous liquors are or can be made, so concentrated that it will be unaffected by the influence of external heat and moisture until properly diluted, the same being placed in casks or other and suitable vessels to permit it to be readily handled or transported, substantially as hereinbefore contemplated and described.

Second, as a new article of manufacture or merchandise, sweet cider so concentrated that it will not be affected by external heat or moisture until properly diluted, the same being placed in casks or other suitable vessels to permit it to be readily handled and transported, substantially as hereinbefore described.

No. 35,920.—J. H. BRINTON, of West Chester, Pa.—*Improvement in Hoppers of Machines for Sowing Grain, &c., Broadcast.*—Patent dated July 22, 1862.—This invention consists in supporting and vibrating the distributing bar in and upon adjustable bearings underneath the hopper, so that the contents of the latter shall not bear upon the vibrating bar, and so that the opening through the bottom of the hopper may be opened or closed as may be required for the particular kind of material that is to be dropped from it in regulated quantities, there being spuds upon the bar that project up into the hopper to prevent the material therein from clogging or chocking the opening.

Claim.—In combination with the wedge-shaped opening through the hopper bottom, the wedge-shaped vibrating bar *d*, when said bar is supported upon adjusting devices below the hopper, and is furnished with spuds which extend up into the hopper, substantially in the manner and for the purpose set forth.

No. 35,921.—A. R. BURDICK, of Racine, Wis., and C. D. READ, of Elgin, Ill.—*Improvement in Corn Harvesters.*—Patent dated July 22, 1862.—This machine is designed for picking corn from the standing stalks and husking them at the same operation. And the invention consists in the employment of a screw in connexion with cutters and yielding segments applied to a guide frame; all arranged so as to be attached to a mounted frame or wagon, and perform the work as the latter is drawn along in proper relation to the rows of corn.

Claim.—The segments G and cutters M, with or without the screw F, arranged to operate substantially as and for the purpose herein set forth.

Also, in combination with the screw F, segments G and cutters M, the bars A A B B, frames C C, and bars E E, all arranged for joint operation as and for the purpose specified.

No. 35,922.—F. A. CHAPELLE, of Paris, France.—*Improvement in Tents.*—Patent dated July 22, 1862.—This invention consists in the arrangement within a tent, of a hammock suspended at one end from an upright in the centre, and supported at the other end by a metal rod secured to the upper edge of the knapsack, which is placed on the ground, by straps.

Claim.—The attachment to and combination with a tent of the character and general disposition herein referred to, of hammocks suspended in the manner and for the purposes herein set forth.

No. 35,923.—DANIEL CLOW, of Janesville, Wis.—*Improvement in Harvesters.*—Patent dated July 22, 1862.—In front of the driving wheel and between the cross-beams of the frame is a stirrup which is secured to the said beams, so that it can be easily tilted towards the rear or front of the machine as may be desired. Upon the upper surface of the base of the stirrup is a hub or fulcrum, upon which is hung a pitman, having its rear end curved to pass by the side of the wheel, and on its inner edge is a recess or boxing into which a cross-head C is placed and permanently held by means of a key. Attached to the sides of the stirrup are springs extending forward so as to come in contact with the sides of the pitman at or near the end, for the purpose of easing the motion of the cross-head upon the cams on the under side of the cross-head and regulating the motion of the machine.

Claim.—The adjustable hinged stirrup E, in combination with the pitman D, when constructed and arranged in relation to each other, as specified and for the purposes described

Also, the springs G G2, in combination with the said stirrup E, and the pitman D, when the several parts are constructed, arranged and operate in the manner and for the purpose specified.

Also, the cross-head C, in combination with the said pitman and the main driving wheel A, when the several parts are constructed, arranged and operate in the manner and for the purposes specified.

No. 35,924.—G. N. CUMMINGS, of Meriden, Conn.—*Improved Mode of Attaching Door Knobs to their Spindles.*—Patent dated July 22, 1862.—This invention consists in the arrangement of a sleeve with a square socket in combination with a screw-thread cut into one of the knobs and screwing upon the end of the rod which connects the two knobs, and with a square projection on the inner end of the shank of said knob corresponding with the square socket in the sleeve in such a manner that by means of the screw-thread in the knob and on the end of the connecting rod, the distance between the two knobs can be exactly adjusted to the thickness of various doors.

Claim.—The employment or use of a sleeve C, with a square socket *d*, in combination with a square projection *e*, on the end of knob A, said knob being secured to the rod B by means of screw-threads *c c'*, as and for the purpose herein shown and described.

No. 35,925.—JAMES DONNING, of Paterson, N. J.—*Improvement in Burners for Coal-Oil Lamps.*—Patent dated July 22, 1862.—This invention consists in the employment of a long, wedge-shaped deflector resting upon the wick tube, and connected with another deflector rising above the wick and provided with an opening at the top for the flame, and also with perforations for the admission of air to be supplied to the base of the flame. Air, also, passes up between the deflectors to the flame, the two being connected and removable together.

Claim.—The cones *e* and *f*, connected to each other and removable together from the wick tube, and provided with the openings 2 2, to regulate the action of the air on the flame, the parts being proportioned, substantially as specified and for the purposes set forth.

No. 35,926.—OTTO ERNST, of New York, N. Y.—*Improvement in Tobacco Pipes.*—Patent dated July 22, 1862.—This invention consists of a smoking-tube made of glass, provided with a second tube, the end of which latter forms a piston for forcing the tobacco forward as it is consumed.

Claim.—The piston pipe or tube formed of glass in the manner specified, and constituting a new article of manufacture for smoking tobacco, as set forth.

No. 35,927.—JOSIAH EVELAND, of Elizabeth City, N. J.—*Improvement in Machines for Turning Irregular Forms.*—Patent dated July 22, 1862.—This invention relates to an improvement in the machine generally known as "Blanchard's lathe," and it consists in the employment of two or more travelling cutter frames, having different rates of speed, and so arranged in relation to the pattern and the work that the cutter of the slowest frame will act upon the quick curved surfaces of the work, while the cutter of the frame having the more rapid movement will act upon the slightly curved parts of the work. The pulleys and belts for transmitting motion to the working parts are so arranged as to admit of the latter, by the adjustment of a single lever, being readily connected to or disconnected from the driving shaft, at the will of the operator.

Claim.—First, the combination in the machine specified of two or more cutter frames, so arranged as to operate with different rates of speed in their travelling movement, substantially as and for the purpose set forth.

Second, the arrangement of the belts *i j n*, and loose pulleys *k m*, with the shaft B and screw shaft G, substantially as shown, for the purpose of readily communicating motion to the pattern and work, and stopping the same simultaneously with the throwing of the screw shaft G in and out of gear with the nuts of the pulley frames F of the cutter frames C C'.

No. 35,928.—H. C. FLETCHER, of Eden, Vt.—*Improved Machine for Cutting Roots.*—Patent dated July 22, 1862.—This invention consists in the employment of a hopper provided with inclined ends and parallel vertical sides, having the lower edges of the latter curved to form a portion of a circle, against which a box is fitted and works, the said box having the cutters fitted in it, and being suspended from a rock shaft, by which means the roots are cut horizontally and vertically.

Claim.—First, the cutters G H, when connected to swinging pendants E, so arranged that the cutters will move in the arc of a circle, substantially as and for the purpose set forth.

Second, the construction and arrangement of the parts to which the cutters are directly attached, to wit, the curved side pieces *f f*, and bar F, when said parts are arranged with the lower curved ends of the side pieces *b b* of the hopper, to operate as set forth.

No. 35,929.—J. HERON FOSTER, of Pittsburg, Pa.—*Improvement in Attaching Movable Type to Cylindrical Surfaces.*—Patent dated July 22, 1862.—This invention relates to that class of printing presses in which the form is locked up on a detachable or permanent segment of a continuous rotating or oscillating cylinder called by compositors a "turtle," and

which constitutes the bed. The invention consists in stereotyping all but the latest news matter, while the columns in which it is desirable to make frequent changes are set up of movable type in the form with the stereotype plate and the paper printed therefrom, which arrangement admits of the expeditious changes necessary in a daily paper.

Claim.—First, using a stereotype plate in combination with movable type, on a curved surface, by making that portion of the "turtle" or segment of a cylinder upon which the base of the type rests, deeper than that part occupied by the stereotype plate, for the purpose of bringing the face of the type to the same degree of curvature, also for creating a wall or shoulder against which the type may be secured.

Second, the use of column rules in the form of the segment of a circle, having grooves on one or both sides describing the same curve, in combination with wedge-shaped "leads," or equivalent device, for the purpose hereinbefore stated.

Third, separating the upper portion or face of the lines of type (arranged for printing on a curved surface) to a greater distance than the base thereof, by means of wedge-shaped "leads," or equivalent device, without requiring the type to be grooved for the purpose of retaining them in place

Fourth, the use of a stereotype plate formed in such a manner as that the face or lettered surface shall be longer and project over the lower edge of the bearing part next to the movable type, when used upon a cylinder or curved surface, sufficient to dispense with the use of wedged-shaped column rules, which would be indispensable upon a curved surface, if this was not done.

No. 35,930.—LAVINIA H. FOY, of Worcester, Mass.—*Improvement in Corset Skirt Supporters.*—Patent dated July 22, 1862.—This supporter is formed of a band to fit around the waist, provided with front pieces, and having at its lower edge a piece projecting horizontally, and also provided with adjustable shoulder straps.

Claim.—A corset skirt supporter constructed substantially as represented in fig. 1.

No. 35,931.—R. A. GOODYEAR, of New York, N. Y.—*Improvement in Snap Hooks.*—Patent dated July 22, 1862.—This invention is explained by the claim.

Claim.—As an article of manufacture the snap hook, constructed substantially as herein described, by providing the same in lieu of the ordinary metallic spring, with a spring made of vulcanized India-rubber, and locating the same within the body of the hook or of the snap, or of both, in combination with a shoulder upon the hook or snap to prevent the rubber spring from falling out or being displaced.

No. 35,932.—G. W. GRISWOLD, of Logansport, Ind.—*Improved Bridle Halter.*—Patent dated July 22, 1862.—This invention consists in attaching the bridle portion, which consists of a bit or bits, the ordinary reins, a split strap and a snap hoop, to the halter in such a manner as to admit of the former being readily attached and detached so as to be converted from a bridle to a halter, and *vice versa* as desired, without the necessity of removing the halter.

Claim.—The straps *k k*, united to the bit, and hooked or buckled to the head or forehead strap, the whole being constructed and operating substantially in the manner and for the purpose herein described.

No 35,933.—G. W. GRISWOLD, of Logansport, Ind.—*Improved Can for Preserving Fruits, &c.*—Patent dated July 22, 1862.—This invention is explained by the claim.

Claim.—A fruit can or jar, having a tapering neck, as described, down which a cork or a cork or liquid packing may be forced or drawn by atmospheric air, produced by the shrinking of the contents of said can or jar, as described, and for the purposes mentioned.

No. 35,934.—G. H. HAWKINS, of New York, N. Y.—*Improvement in Bonnet Frames.*—Patent dated July 22, 1862.—The bonnet frame is composed of a series of wires bent on a suitable frame to the required shape, and braces looped at the ends and soldered to the wires at the several points of contact, the whole being united to a suitable crown and covered with a net.

Claim.—A bonnet frame A consisting of wires B C D D′ and braces E, said braces being looped at the ends and soldered to the wires B C D at the several points of contact, when united with a suitable crown and covered with a net or its equivalent, all substantially as shown and described.

No. 35,935.—G. F. HAWLEY, of Vienna, Ill.—*Improvement in Machines for Filing Saws.*—Patent dated July 22, 1862.—The sliding frame E is fitted to move in guides in the main frame; it is connected at one end by means of a pivot to a block F of semicircular form and having a graduated scale marked upon it, and the front part of the file-frame is provided with a pointer or index i, by means of which the frame E may be set at any required angle on the main frame. In the main frame is placed a saw-clamp G, formed of two parallel bars, the ends of which are attached to two uprights having between them a horizontal bar or saw-rest *o*, which bar is grooved longitudinally for the reception of the back of the saw to be filed, and is so arranged as to be adjusted to any position vertically. Within the frame E is fitted a

frame I, hinged at its front end to the frame E so that its other end may rise and fall, and within the frame I is placed another sliding frame K operated by a lever. At the rear end of the frame K is secured a socket *o* in which one end of the saw-file is fitted, and which has an index *r* that traverses over a graduated arc or segment *s* to indicate the angle or position of the socket.

Claim.—First, the adjustable sliding frame E provided with the internal frame I and internal sliding frame K in connexion with the adjustable clamp G and adjustable rest *o*, or its equivalent, all arranged substantially as and for the purposes set forth.

Second, the socket *o*, index *r*, and segment *s*, as shown and described, when applied to the sliding frame K and used in connexion with the frame E I, as and for the purpose specified.

Third, the index *i* and graduated block F, the index being attached to the frame E, and the block F attached to the bar *h*, when said index and block are used in connexion with the frames E I K, as and for the purpose set forth.

No. 35,936.—SOLOMON HUNT, of Danville, Ind.—*Improvement in Foot Warmers.*—Patent dated July 22, 1862.—This invention is designed as an improvement upon the device patented to the said Hunt on the 25th of February, 1862, and it consists in interposing between the lamp and the radiator a combustion chamber, for the purpose of preventing the heat of the flame from reaching the lamp containing the alcohol.

Claim.—The combustion chamber G interposed between the lamp and the radiator, substantially in the manner and for the purpose herein shown and described.

No. 35,937.—G. B. JEWETT, of Salem, Mass.—*Improvement in Artificial Legs.*—Patent dated July 22, 1862.—This improvement is designed to be applied in cases of amputation above the knee-joint, and the device is so constructed that its length may be easily and nicely adjusted to suit the wearer, and so that the limb may be readily bent to assume a natural position when the person is seated.

Claim.—First, the leg piece A, to which the foot B is hinged at one end, and the spindle D at the other, substantially as described.

Second, the shoulder *e* and pad *i* for limiting the motion of the foot B, substantially as specified.

Third, the block E with the spring F, attached to its front in the manner substantially as set forth.

Fourth, connecting the socket H to the spindle D in the manner substantially as specified, whereby the length of the leg may be adjusted.

Fifth, in combination with a spindle D pivoted to the head of the leg piece A, the plate *h*, and pad *m*, for regulating and limiting the motion of the joint or the position of the leg when straightened out, substantially as set forth.

Sixth, the combination of the socket H and its adjustable pad O with the leg piece A, when they are hinged and connected together substantially in the manner specified.

No. 35,938.—W. B. KEHEW and C. H. FIFIELD, of Salem, Mass.—*Improvement in Hot-Air Registers.*—Patent dated July 22, 1862.—The register or outlet pipe is provided with two upright tubes arranged one within the other, the outer tube being higher than the inner one and larger in diameter than the register, and having openings extending around the lower end. In the centre of the inner tube are placed upright tubes formed with an elbow at the lower ends and passing through the tubes B and C; the object of the device being to combine the highly heated air from the furnace with the cold air at the lower part of the room and to promote circulation of the hot-air and ventilation.

Claim.—First, the employment, over the registers or outlet pipes of hot-air furnaces, of the upright tubes B and C, the outer tube being perforated at the lower end in the manner specified.

Second, placing in the inner tube B the tubes E E E, the whole arrangement operating in the manner and for the purpose substantially as set forth.

No. 35,939.—M. R. KENYON, of Providence, R. I.—*Improvement in Lamp-Chimney Cleaners.*—Patent dated July 22, 1862.—This invention is explained by the claim and engraving.

Claim.—First, a series of elastic wiping fingers, each of which is fixed at one end and is loose at the other end, which, by its own elasticity, acts independently of the others, and exerts a yielding pressure against the interior walls of a lamp-chimney when placed therein, substantially as herein shown and described for the purpose specified.

Second, the arrangement of two sets of such fingers so that the loose ends of one set of fingers extend toward the fixed ends of the other set of fingers, substantially as herein shown and described, for the purpose specified.

Third, in combination with two sets of elastic fingers so arranged, two sliding disks arranged with a spiral spring or an equivalent force to press the said disks or other sliding piece toward the fixed ends of each set of fingers, substantially as shown and described, for the purpose specified.

No. 35,940.—G. H. KIDNEY, of Cleveland, Ohio.—*Improved Clothes Wringer.*—Patent dated July 22, 1862.—This invention consists in the employment of two slotted angular-curved

bars or levers, which are made to act upon the bearings of the upper roller by means of springs within boxes at the lower end of the curved bars. The device is held upon the edge of the tub by means of self-adjusting levers hung upon a rod.

Claim.—The combination of the slotted angular-curved lever E E, roller A A, springs in boxes D D, jaws H H, and self-adjusting levers F F, all arranged as and for the purpose specified.

No. 35,941.—JAMES LEE, of Stevens's Point, Wis.—*Improvement in Breech-Loading Fire-arms.*—Patent dated July 22, 1862.—Upon the lower part of the rear end of the barrel is formed a tongue *d* which is fitted to slide in and out of a groove in the frame below the breech, and across the tongue is cut vertically a notch *e* for the front part of the hammer butt to work in. This part of the hammer is provided with a transverse notch just wide enough for the tongue *d* of the barrel to pass through, so that the barrel may be locked to the breech in a closed condition in all positions of the hammer except that of half-cock, and is unlocked in that position of the hammer.

Claim.—The hammer E provided with a notch *g* and applied in combination with the notched tongue *d e* on the rear of the barrel, substantially as and for the purpose herein described.

No. 35,942.—W. A. LIGHTHALL, of New York, N. Y.—*Improvement in Steam-Boilers.*—Patent dated July 22, 1862.—This invention consists in creating a forced and continuous circulation of the water contained in a steam-boiler, through the lower section of the series of the tubes of the boiler, and from thence through the remaining sections of the series of the same to the body of the boiler, by means of a proper force pump operated by any desired means.

Claim.—Producing a forced and continued circulation of the water in a steam-boiler, either through the tubes of the boiler or through and in the shell or body of the same by mechanical means, as and for the purposes herein set forth.

No. 35,943.—W. S. MABBETT, of Calverton Mills, Md.—*Improved Preserving House.*—Patent dated July 22, 1862.—The ice-chamber B is placed centrally within the building, and over this chamber is the ice compartment C, the flooring of which is inclined towards the upper edges of the ice-chamber. The bottom of the ice-chamber is also inclined so as to form a gutter at its centre, one end of which communicates with a waste-pipe extending to the floor of the compartment F in which the articles to be preserved are placed. The water flowing through the waste-pipe serves to keep the floor of the apartment F cool.

Claim.—The combination of the ice-chamber B and ice compartment C with the waste-pipe G arranged within the building A, as and for the purpose herein set forth.

No. 35,944.—G. T. MAY, of Tompkinsville, N. Y.—*Improved Gaff Sails.*—Patent dated July 22, 1862.—This invention is explained by the claim.

Claim.—The application of the strain rope *c* or its equivalent diagonally from clew to throat of a gaff sail, as specified, in combination with a gaff sail whose head *d* and luff *e* are of equal length with each other, and whose after-leech *f* and foot *g* are also of equal length with each other, so that when the upper half A is doubled down on either side from the line of the strain rope *c* upon the lower half B the sail will be thereby reduced in area just one-half, will be also a smoothly duplicated or two-fold sail over the area of the said lower half, the strain rope *c* or its equivalent then becoming a bolt rope to the bight of the double sail, and so that by thus resetting the upper half in juxtaposition with the lower half, the said double sail will be also thereby trimmed for use on either tack without any necessity for furling the said upper half, substantially as specified.

No. 35,945.—WILLIAM MEIGS, of Waynesville, Ohio.—*Improvement in Harvesters.*—Patent dated July 22, 1862.—The reel is formed of curved rods *t*, fitted loosely in two sets of arms *r s*, one set *r* being attached to two shafts, and the other *s* to a ring suspended from a bar, all so arranged that as the arms rotate, the rods *t* will sweep over the front edge of the platform at an equal distance from it all around its edge and throw the cut grain evenly upon the platform. Upon the lower part of a vertical shaft T is placed a cam formed of a curved annular plate bent out of a horizontal plane and secured to the upper surface of a wheel *w*. Fitted in the shaft T is a rake shaft V having in it a longitudinal slot which allows it to move a certain distance, and attached also to the shaft T is a spring W, which tends to keep the rake arm off from the said shaft the length of the slot. In the rear of the platform at its discharging side is a stationary rake B′, the teeth of which pass between those of the arm V, and which serves as a stop for the cut grain, causing the latter to be discharged in gavels upon the platform.

Claim.—First, the reel formed of curved rods or beaters *t*, fitted in arms *r r s*, arranged as shown in combination with the curved or semicircular sickle bar P and platform L, as and for the purpose specified.

Second, the cam U, constructed as shown in connexion with the spring W, and longitudinal slot *c′*, in the rake arm V, for the purpose of operating the latter as set forth.

Third, the stationary rake B′ arranged as shown, in combination with the intermittingly rotating rake arm V, for the purpose specified.

No. 35,946.—J. C. PENNINGTON, of Paterson, N. J.—*Improvement in the Manufacture of Nitrate of Potash from Nitrate of Soda.*—Patent dated July 22, 1862.—The object of this invention is to produce or prepare saltpetre and bi-carbonate of soda from common pearlash or carbonate of potash and Chili saltpetre or nitrate of soda.

Claim.—The within described process of manufacturing saltpetre and bi-carbonate of soda by treating nitrate of soda with bi-carbonate of potash, and alternately crystallizing from the solution bi-carbonate of soda and nitrate of potash, substantially in the manner described.

No. 35,947.—H. O. PEABODY, of Boston, Mass.—*Improvement in Breech-Loading Fire-arms.*—Patent dated July 22, 1862.—The trigger guard lever is forked above its fulcrum pin, the forked portion being connected to the hinged breech-block by means of a pin *d*, which works in a long slot provided in the breech-block for its reception. By pulling down the rear end of the trigger-guard lever, the pin is caused to move along the slot and so depress the front end of the breech-block below the barrel to permit the introduction of a cartridge. Attached to the rear part of the breech-block is a spring provided at its front end with a roller which presses against the under part of the breech-block, and rests in notches at the extremities of its movement for retaining in an open or closed position the breech-block and barrel. An elbow lever of thin steel plate is arranged to work in a mortise in the breech frame below the barrel, and serves to withdraw the discharged cartridge case from the barrel, its operation being effected by the depression of the breech-block preparatory to the insertion of a cartridge.

Claim.—First, having the under part of the breech-block slotted as shown at *e*, in combination with the pin *d* and lever E, as and for the purpose herein shown and described.

Second, the employment of the roller *i* and its spring G in combination with the notches *j l* and block D, as herein shown and described.

Third, the combination of the lever F with the breech-block D and frame A, as herein shown and described.

No. 35,948.—ASA PETTENGILL, Jr., of Peterborough, N. H.—*Improvement in Stave Machines.*—Patent dated July 22, 1862.—This invention consists in the employment of a movable lever or switch in connexion with a guide, to which the former is applied, so operated by the block and carriage, that each stave while being drawn backward will be deflected laterally upon the chute and be discharged from the machine, so that by means of the chute the usual labor of removing the stave from the carriage and from below the block and the guide will be avoided.

Claim.—The combination of the switch F with the guide E, the saw A, and the carriage D, the whole being made to operate substantially in manner and for the purpose as specified.

Also, the above-described arrangement and combination of the guard H and the chute G with the switch F, the guide E, the saw A, and the carriage D.

No. 35,949.—E. O. POTTER, of New York, N. Y.—*Improvement in Cartridges.*—Patent dated July 22, 1862.—This invention consists in uniting pressed powder to a ball by surrounding their adjoining edges with a collodion belt or zone extending over upon each sufficiently far to hold them firmly together while being transported or handled.

Claim.—Uniting solid or pressed powder to a ball by a belt or zone of collodion in the manner and for the purpose substantially as described.

No. 35,950.—H. F. READ, of Brooklyn, N. Y.—*Improvement in Pipe Wrenches.*—Patent dated July 22, 1862.—This wrench is constructed with a toothed eccentric attached to the jaw, and to which eccentric is attached a chain and rod surrounded by a spiral spring placed within a hollow handle, and serves, with the rod, to keep the eccentric pressed against the pipe.

Claim.—In combination the hollow handle C, spiral spring *i*, chain *h*, and eccentric B, substantially as described and for the purpose set forth.

No. 35,951.—E. R. READ and N. F. REED, of Hyde Park, Vt.—*Improved Mop Head.*—Patent dated July 22, 1862.—This invention consists in the employment of a metal bar provided with teeth and hinged at one end to a bar attached to the handle, and at the other end provided with a spring catch by which the mop is secured between the bars.

Claim.—The employment of the lever B *b*, hinge C, and spring catch E, arranged to operate together, substantially as herein described.

No. 35,952.—T. K. REED, of East Bridgewater, Mass., and H. F. PACKARD, of North Bridgewater, Mass.—*Improvement in Eyelet Machines.*—Patent dated July 22, 1862.—This machine is composed of a stationary hopper in which the eyelets are placed and from which they are swept by an oscillating brush into holes provided for their reception in an intermittently rotating cylinder, by which they are delivered to a laterally oscillating inclined chute which deposits them one by one upon an upright pin, working through an upright reciprocating bolster, by which, after the perforations provided in the cloth or other material for their reception have been placed over them, they are brought into contact with a stationary punch and riveted, the several parts being operated by a lever treadle, or other suitable mechanical means. by which they are severally put in motion.

Claim.—First, the combination of the hopper D, the rotating cylinder F, the cam H, and the chute I, substantially as and for the purpose herein specified.

Second, the oscillating brush E applied and operating in combination with the hopper D and cylinder F, substantially as and for the purpose herein described.

Third, the stationary brush G applied and operating in combination with the hopper D and cylinder F, substantially as and for the purpose herein set forth.

Fourth, the curb J and inclined plane K applied and operating in combination with the cylinder F and chute I, substantially as and for the purpose herein specified.

Fifth, the combination of the laterally oscillating chute I, the reciprocating bolster L, pin *h*, and fixed punch *l*, the whole arranged and operating substantially as and for the purpose herein set forth.

No. 35,953.—HENRY REICHERT, of Shippensburg, Pa.—*Improvement in Flour Bolts.*—Patent dated July 22, 1862.—To the inside of the arms or bars C which support the bolting cloth are fastened metal spring bars E, which are caused to vibrate at each revolution of the bolt by means of sliding hammers passing loosely through the main shaft. The bars E upon one side of the shaft are connected to those on the opposite side by metal rods or straps G, whereby the vibration caused by the fall of the sliding hammer is imparted to the bolting cloth both above and below the shaft. The sliding hammers are regulated by means of adjusting plates H through which they pass. These plates are confined to the shaft by proper fastenings so that they can be drawn close against the hammers to keep them stationary, or be adjusted with any degree of force less than the full blow.

Claim.—First, the combination of the bars C C, and sliding hammers F, and adjusting plates H, substantially as set forth.

Second, the combination of the rods or straps G G, with spring arms E, hammers F, and arms C C, as and for the purposes set forth.

No. 35,954.—HORACE A. ROBISON, of Cleveland, Ohio.—*Improvement in Apparatus for Pressing and Ironing Hats.*—Patent dated July 22, 1862.—This invention consists in the employment of a tapering or wedge-like tenon B, having a vertical front and inclined back, and fitting within a corresponding mortise. In the bottom of the mortise is a lateral projection C, the front part of which is inclined to correspond with the V-shaped bottom of the tenon B, for the purpose of holding the collar firmly in a horizontal position. Projecting from the upper side of the disk D is a round tenon or journal D″ by means of which, the block with the hat can be readily turned or placed in any position desired.

Claim.—First, the tapering tenon B, and tapering mortise with the projection C, for the purpose set forth.

Second, the collar, and tenon or journal D 2 in combination with the tapering tenon B, and mortise, as above described.

No. 35,955.—C. H. ROBINSON, of Boston, Mass.—*Improvement in Lamps.*—Patent dated July 22, 1862.—The nature of this invention is explained by the claim.

Claim.—The wick tube and wick moving vertically together, instead of moving the wick alone, as heretofore practiced.

Also, the simultaneous vertical motion of the wick tube and button, by which their distance apart is always kept uniform, by means of the screw and attached parts, as herein fully described, or their equivalents.

No. 35,956.—J. A. SCHNEIDER, of Cleveland, Ohio.—*Improvement in Truss Pads.*—Patent dated July 22, 1862.—This invention consists in so constructing the truss that the pressure of the pad may be easily and conveniently regulated after it has been properly adapted and fitted to the body of the wearer, which is effected by means of a hinged pad plate provided with a spring, one end of which is connected to a cog wheel operated by a worm screw. By turning the thumb head of this screw the spring is more or less coiled and the tension of the said spring thereby regulated.

Claim.—In combination with a hinged pad plate E, the spiral spring G, cog wheel H, and worm screw I, the whole being arranged in the manner substantially as set forth and for the purpose specified.

No. 35,957.—O. C. SMITH, of Salem, Mass.—*Improved Submarine Armament of Vessels.*—Patent dated July 22, 1862.—This invention consists in the application of two horns or projections to each end of an iron-clad vessel, arranged to strike an enemy's vessel below the water line. Between these horns are placed ways supporting carriages, by means of which mortars or other pieces of ordnance may be run out from an opening in the vessel's side and exploded under an enemy's vessel. The carriages are moved in and out by means of a windlass and rope or chain, operated by the engine or other power. The windlass and ropes are placed within a water-tight passage extending along the bottom of the vessel and communicating with wells near the ends of the vessel.

Claim.—The combination of the mortars J and mortar carriages F G with the passage H and wells D, substantially as and for the purpose herein shown and described.

Also, the combination of the windlasses E E L L with the carriages F G and mortars J, in the manner and for the purpose herein shown and described.

Also, the combination of the horns C C and cross-bar I with the mortar carriages F G, in the manner herein shown and described.

No. 35,958.—PIERRE THIRY, of Paris, France.—*Improvement in Horseshoes.*—Patented in France, May 27, 1861.—Patent dated July 22, 1862.—This invention consists of a portable device designed to be readily applied and adjusted to the ordinary shoes of horses or other animals to prevent them from slipping. The claim explains the general construction and mode of applying the device.

Claim.—The herein-described apparatus to be applied to the shoes of horses, mules and other shod animals, to prevent them from slipping in frosty weather, the same consisting of a brace extending across the foot, and a toe clip extending from the toe backward, when both are provided with spikes, and are constructed to operate substantially in the manner and for the purpose herein set forth.

No. 35,959.—L. W. TURNER and H. H. MIX, of Meriden, Conn.—*Improved Trace Fastening.*—Patent dated July 22, 1862.—This invention consists in the employment of a small rod or shaft D, having a pendent lip at its outer end, the rod or shaft being fitted in a box secured to the whiffletree, and having a spiral spring connected at one end to the rod or shaft, which spring is enclosed within the box and has its other end attached thereto so as to keep the lip of the rod or shaft in contact with the face of the draw iron of the whiffletree, the parts being used in connexion with a stop and thumb piece attached to the inner end of the rod.

Claim.—The rod or shaft D, provided with the pendent lip *e*, and thumb piece E, in combination with the box C, spiral spring *b*, and draw iron B, with or without the stop *j*, all arranged and applied to the whiffletree, substantially as and for the purpose set forth.

No. 35,960.—G. W. VAN BRUNT, of Horicon, Wis.—*Improvement in Seeding Machines.*—Patent dated July 22, 1862.—This invention consists in placing the openings in the rear of a line drawn perpendicularly through the centre of the seed cylinders and forming a chambered recess in the under side of said caps concentrically with the axis of the seed cylinder, whereby any seeds which may chance to lodge upon the top of the partitions forming the seed cells or pockets, are prevented from being crushed or bruised between the partitions and the inner bottom edge of the opening in the cups while the seed cylinders are in motion.

Under the seed box and cylinders is arranged a series of pendent tubes, formed each of two truncated hollow cones, united together at their smaller ends. In the lower part of each tube is a cone provided at its lower end with a circular flanch. A space is left between the cones and the tube for the passage of the seed.

Claim.—First, the concentric-chambered recess *k* in the cap G, in combination with the cylinders E F, and seed openings *s*, when arranged to operate in the manner and for the purpose set forth.

Second, the cones N, having a horizontal circular flanch *m* at their lower ends, in combination with the peculiarly shaped tubes M, when constructed in the manner specified.

No. 35,961.—JACOB VAN HORN, of Plainfield, Ill.—*Improvement in Cultivators.*—Patent dated July 22, 1862.—The standards are formed as shown in the engraving, and are provided with wings near their lower ends, which may be readily removed or retained for certain operations. The standards are secured to longitudinal bars, which are made adjustable so as to regulate their distance apart.

Claim.—The combination of the peculiarly constructed standards S with the removable wings *a*, the regulating oars B B′, and braces F, all arranged and operating as and for the purposes described.

No. 35,962.—G. W. WALKER, of Boston, Mass.—*Improvement in Cooking Stove.*—Patent dated July 22, 1862.—The object of this invention is to provide a means for carrying on not only the process of baking in a closed oven, but one by which roasting may be effected, when desired, by direct radiation of heat and light from the fire into the oven, and is designed to combine the advantages of the ordinary cooking stove having a closed oven with those of the common tin kitchen.

Claim.—Constructing the oven so as to open toward the fireplace grate, and providing the opening with a register, or means by which heat and light from the fuel, when on fire in the grate, may either be radiated directly into the oven or excluded therefrom, substantially as and for the purposes above specified.

Also, the arrangement and combination of the register-slide chamber B, the register K, the open grate *a*, oven A, and the flue space about the oven, the whole being substantially as above described.

No. 35,963.—HENRY WARNER and B. F. PALMER, of Boston, Mass.—*Improvement in Ventilating Windows for Tents.*—Patent dated July 22, 1862.—Near the apex of the tent are a number of openings, over which is arranged a hood securely sewed to the tent near the apex.

The hood may be opened from the inside at one or all of those openings by means of a cord attached to the edges of the hood. Weights attached to cords connected to the edges of the hood outside, serve to close the openings when the cord inside is released.

An opening is provided in the side of the tent over which is a slide arranged to be opened from the inside.

Claim.—First, a secondary hood or cowl attached to the canvas of the tent near the apex, when the same is so arranged that it can be raised at one or more points by cords worked from the interior of the tent, and returned to position by weights, or their equivalents, the whole operating in the manner substantially as described.

Second, a sliding canvas shutter, D, arranged substantially as described, in combination with an aperture I, for the purposes specified.

No. 35,964.—T. W. WISNER, of Osceola, Mich.—*Improved Ready Marker.*—Patent dated July 22, 1862.—The sliding blade is so arranged in relation to the handle and a spring catch that by turning the open end down and releasing the blade the latter will slide out and be retained in working position by the spring catch, and upon turning it up and releasing the spring catch the blade will return to the handle, so that one hand only need be used in opening and closing it.

Claim.—The longitudinally sliding blade B, or its equivalent, in combination with the handle A and spring catch *c*, constructed and operating substantially as and for the purpose shown and described.

No. 35,965.—J. P. WOODBURY, of West Roxbury, Mass., and S. S. GRAY, of Boston, Mass.—*Improvement in Sabot for Feather Projectile.*—Patent dated July 22, 1862.—This invention consists in combining with a winged projectile an elongated cylindrical sabot made of paper pulp or other similar material, which fills the spaces between the wings, and forms with the shot a solid cylindrical mass which fits the bore of the gun and serves to stop the windage, and, if the gun be rifled, takes the grooves and imparts rotation to the projectile. A hole is provided in the rear of the sabot for the purpose of exposing a part of the shot directly to the force of the charge and relieving the sabot of a portion of the pressure.

Claim.—The employment, in combination with a winged shot, of a sabot, externally cylindrical and fitting the gun, and enveloping and enclosing the wings, and made with a central aperture C for detaching the same, substantially as described.

No. 35,966.—CALVIN and G. M. WOODWARD, of New York, N. Y.—*Improvement in Steam Pumps.*—Patent dated July 22, 1862.—The object of the combination of parts claimed and shown in the engraving, is to render the operation of the valve more certain than that by a tappet or other valve motion actuated without a fly-wheel; and the connexion of the crank shaft with the piston rod, by means of the vibrating link and sliding box, permits its arrangement between the cylinders, where it occupies no room in a direction lengthwise of the cylinders, and admits of the cylinders being brought a little closer together than when a tappet motion is used to work the valve.

Claim.—Combining a crank and fly-wheel with a direct connexion steam pump, by means of a vibrating link G and sliding box *d*, arranged and applied in connexion with the piston rod and between the steam and pump cylinders, substantially as herein specified.

No. 35,967.—J. M. BROWN, of Cincinnati, Ohio, assignor to Himself and DANIEL MCLAREN, of the same place.—*Improvement in Car Brakes.*—Patent dated July 22, 1862.—This invention relates to a provision whereby an excessive strain upon either the brake rope or the windlass acts automatically to draw out said rope and to relax or remit a portion of the tension proportionate to said excess, so that any sudden or violent strain upon the cable acts merely to slip the windlass and to draw the cable out, while any slack resulting from the shortening of the strain, or other cause, is immediately taken up by the windlass.

Claim.—The shaft G, having a fast collar N and an adjustable collar O, loose friction windlass R, nut P, and spring Q, or their equivalents; the whole being so combined as to produce an automatic relaxation of excessive brake tension, substantially as set forth.

No. 35,968.—GEORGE CAMPBELL, of Waterford, N. Y., assignor to Himself, GEORGE GAGE, and G. C. GAGE, of the same place.—*Improvement in Circular Knitting Machines.*—Patent dated July 22, 1862.—This invention relates to the take-up of those cylinder knitting machines in which the needle plate or needle ring and the work have a rotary motion, and it consists in a means of producing and controlling the movements of a pair of take-up rolls arranged above the knitting machine with their axes perpendicular to the axis of rotation of the needle plate or plates.

Claim.—First, the employment for operating the take-up roll or rolls D D′ of a lever F attached to the rotating frame of the take-up, and rotating with the said frame, in contact with a fixed eccentric *q*, a pawl lever E, carrying a pawl *i* and a ratchet wheel *h* geared with the said rolls, the whole combined, applied, and operating substantially as herein specified.

Second, controlling the action of the take-up by the tension of the cloth by means of the frame H, bar *t′*, roller I, spring K, or its equivalent, and rod L, the whole applied in combination with the take-up rolls, and with the pawl *i*, from which they derive motion, substantially as herein specified.

No. 35,969.—WILLIAM CANTER, of New York, N. Y., assignor to Himself and SAMUEL BERNSTEIN, of the same place.—*Improvement in Machinery for Manufacturing Chenille.*—Patent dated July 22, 1862.—The inventor says: In the use of this machine the stuff does not require to be previously woven in a loom as in the ordinary method of production, but the silk which is to form the plush surface, and the wires, or cords, which are to retain the same, are fed directly from suitable bobbins and retained in position at a single operation. The cutting off of the material for the plush and its introduction properly between the longitudinal parts is made continuous by the automatic winding of the former around two endless belts which are drawn with proper speed through the winding apparatus, and may be operated continuously to any extent desired.

Claim.—First, in machines for producing chenille, cutting the plush of a proper length at a continuous operation, after winding it around the two belts G G, by carrying it, when so wound, under or past a cutting edge acting in the plane between said belts, substantially as herein specified.

Second, in such machines the insertion of one of the wires or cords in the triangular or other suitable space between two endless belts G G, and the covering material, for the purpose set forth.

Third, the use, in chenille machines, of the twisted cords U U and dividing post W, when used to operate in connexion with the shaft J, or its equivalent, on the machine, so as to be moved with a velocity corresponding with the means of delivering the chenille to be twisted, substantially in the manner herein set forth.

No. 35,970.—R. M. DAVIS, of Eaton, N. Y., assignor to H. L. HOPKINS, of Lebanon, N. Y.—*Improvement in Harvesters.*—Patent dated July 22, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—First, a finger bar, so combined with the frame of the harvester and the mechanism by which the cutters are vibrated, that it may at pleasure be turned over, so that the machine may be drawn in either direction and perform the same duty, substantially as described.

Second, combining with the outer end of a finger bar of a harvester, a track clearer for the purpose of sweeping the cut grain or grass inward as it falls over said finger bar by mechanism substantially such as represented and described, whereby the track clearer is made to always project rearward or behind the finger bar, and at an acute angle therewith, its movements being governed by the rotation of the finger bar, substantially as described.

Third, combining with the inner end of the finger bar an operative arm, and, by mechanism substantially such as described, the opposite end of said arm with the main frame and draught pole which is pivoted to the main body of the machine, whereby the finger bar may be inverted either by turning the main body of the machine or without changing the main body of the machine, substantially as described.

Fourth, combining with the inner end of the finger bar an operative arm, provided with an extension joint Q, and the ball joints *i w*, or their equivalents, whereby the finger bar may be supported at any desired elevation, and the rotation thereof be accomplished by means substantially such as described.

Fifth, the combination of the pitman or connecting rod with the crank head at one end, and to the knife bar at the opposite end, so that the cutter bar may be inverted without disconnecting the pitman, substantially as shown.

Sixth, the combination of the pitman or connecting rod with the knife bar E and finger bar D, whereby they may both be rotated in the manner substantially as represented and described and for the purposes specified.

No. 35,971.—J. H. DOOLITTLE, of Derby, Conn., assignor to Himself and FRANKLIN FARREL, of Ansonia, Conn.—*Improvement in Wrenches.*—Patent dated July 22, 1862.—This device consists of a single piece of metal bent over near one end to form an angle, and having the inner surface of the bent end serrated or roughened and the opposite surface smooth.

Claim.—A wrench formed with an angle, substantially as hereinbefore described, for the purpose set forth.

No. 35,972.—WILLIAM F. ENSIGN, of Lansingburgh, N. Y., assignor to JAMES WILLCOX, of Brooklyn, N. Y.—*Improvement in Felling Guide for Sewing Machines.*—Patent dated July 22, 1862.—This device is composed of two formers, the one *a* being made with a wing projecting in the rear, and lying at an angle across the path of the feed, and scooped or shelving upwards, when it is connected by an extension or back piece to the plate by which it is attached to the bed of the machine, and made gradually of a tapering spiral or convolute form towards its front end. The other former *d* consists also of a wing arranged a little above or over the side of the back piece *b*, to which it may be connected by a bent arm that permits the said wing to spring and thus forms an elastic blade; it is also made of a tapering spiral or convolute form at its forward end to correspond with the forward end of the other former, and surrounding the same, so as to leave an intervening space for the cloth. Each former has the effect of an elastic blade to accommodate different thicknesses of cloth.

Claim.—As new and useful in sewing machines, guides which serve to fold or turn the

&c.—Patent dated July 22, 1862.—The lining, which forms the bearing, consists of one or

Claim.—As new and useful in sewing machines, guides which serve to fold or turn the edge of the material being sewed, constructing the former or formers of said guides of an elastic blade or blades, capable of springing to adapt themselves to different thicknesses of material, substantially as herein specified.

Further, the combination and arrangement in one instrument, and relatively to each other, either of the surfaces of the former or formers, so that two edges engaged simultaneously within said surfaces, of the same or different material, shall by the feed be presented to the needle, and across its path folded and interlocked, substantially as described and shown.

No. 35,973.—S. M. FEEZLER, of Seneca Falls, N. Y., assignor to Himself, VAN R. STUCK, and SAMUEL THOMAS, of Fayette, N. Y.—*Improvement in Horse-Powers.*—Patent dated July 22, 1862.—This invention consists in an arrangement of cog gearing and pinions for transmitting motion from the driving wheel to the rim of the platform, by which it is designed to gain speed without an undue strain or unequal working of the parts. The draught trees are secured to the sweeps by swivel joints and are connected with each other by chains, by means of which the horses can pass over ground of unequal surface, and the strain upon the sweeps be equalized by being transferred from one to the other when an undue strain is exerted upon any one of them.

Claim.—The set of gearing composed of the parts B C D E E and G G, arranged, combined, and operating substantially as and for the purposes herein set forth.

Also, the draught trees M M M′, secured respectively to the sweeps by means of swivel joints *h h*, so as to have a free turning motion when the same are connected with each other, by means of the flexible chains N N N′ and P P P′, substantially as and for the purposes herein specified.

No. 35,974.—SMITH HEAD, of Millersburg, Penn., assignor to Himself and WILLIAM MCKISSICK, of the same place.—*Improvement in Shingle Machines.*—Patent dated July 22, 1862.—To the side of the endless belt C, which works upon shafts placed in each end of the bed piece, are secured at a suitable distance apart dogs F, which project through spaces between the guides of the bolt, and have notched or serrated edges. To the belt are also attached a series of bars G which serve as bearing surfaces for the bolts, there being a bar in front of each dog F, between which bar and dog the bolt is placed. A circular saw H is placed in close proximity to the bed piece and cuts the shingles from the bolts.

Combined with the framing is a box K, having an inclined endless apron for its bottom, its highest end being at the front or feed end of the machine. Its rear end is inclined so that the lower end of the bolt is thrown forward, and the endless apron at the bottom will carry the bolts to the front end of the machine in a position reverse to that in which they were previously fed to the saw H.

The saw I is used for dressing the bolts preparatory to sawing them into shingles, and works in a slot in a movable bed N, to the outer edge of which is attached a rack engaging with a pinion. This pinion is secured to a shaft whose outer bearing is in the end of a lever, to which a treadle is attached, and by the operation of which the movement of the feed bed N is regulated at the will of the operator.

Claim.—First, the endless belt C, provided with the dogs F and bars G, and fitted to the adjustable bed piece B, as shown, and used in connexion with the saw H, to operate as and for the purpose set forth.

Second, the box K, provided with the endless apron M and inclined back *m*, in combination with the saw H and endless bolt-feeding belt C, all arranged for joint operation as and for the purpose herein specified.

Third, the combination of the bolt-dressing saw I with the shingle saw H, when the former is provided with a feeding bed N, operated through the medium of the rack O and pinions P U, the latter being on an adjustable shaft R, connected with a lever S, having a treadle T attached and arranged as shown, whereby the bed N may be operated at the will of the attendant from the driving shaft E, having a constant motion.

No. 35,975.—J. R. IRWIN, administrator of WILLIAM IRWIN, deceased, late of North Coventry township, Pa., and EDMUND GUEST, of Pottstown, Pa.—*Improved Washing Machine.*—Patent dated July 22, 1862.—This invention is composed of a box containing two semi-cylindrical rubbers, between which the clothes to be washed are placed, a vibrating motion in contrary directions being imparted to the rubbers, the upper one of which is connected to levers, so as to be raised when desirable. The journals of the upper roller pass through and are guided by slotted plates secured to each side of the box.

Claim.—First, the box A, with its semi-cylindrical rubbers D and K, when the latter is so connected to the levers M and N, or their equivalents, as to be thereby raised and lowered, and when a vibrating motion is imparted to the two rubbers in contrary directions, as set forth.

Second, the use of the plates *d* for the reception of the journals of the rubber K, the said plate being so constructed as to guide the upper rubber to its proper position, as specified.

No. 35,976.—WILLIAM PETERS, of Baltimore, Md., assignor to Himself and ALFRED BUCK, of the same place.—*Improvement in Cutting the Bearings of Boxes for Axles, Shafts,*

&c.—Patent dated July 22, 1862.—The lining, which forms the bearing, consists of one or more layers of plates or slabs made of a composition of asbestos and some vegetable or animal fibre or substance, and in some cases of asbestos and plumbago or some mineral substance. Alternate layers of the two substances are placed together and subjected to a heavy pressure, by which they are formed to the desired thickness or shape.

Claim.—Lining the bearings of boxes for axles, shafts, &c., with the plates, slabs, or blocks made of the materials herein set forth.

No. 35,977.—T. W. ROYS and G. A. LILLIENDAHL, of New York, N. Y., assignor to said G. A. LILLIENDAHL.—*Improvement in War Rockets.*—Patent dated July 22, 1862.—The case of this rocket is made of thin iron, and welded to a thick base provided with holes for the exit of the gases. A cylindrical piece of cast-iron is firmly tapped into the base piece, in the line of the axis of the rocket, and upon the cylindrical piece is cast a series of spiral wings or blades placed at such a distance from the holes in the base piece as to allow the issuing gases to expand and exert nearly their full force in propelling the rocket before they strike the screw to cause the rotation. Above the base piece is an open-topped dome or washer C, to allow the gases to freely enter and be distributed equally to the vent holes.

Claim.—First, causing the issuing gas to impinge upon spiral wings or equivalent deflectors at a little distance in the rear of the orifice or orifices, substantially as and for the purposes herein set forth.

Second, the use of the internal casing C, within the rocket, arranged in the manner and so as to equalize the issuing of the gases, as herein set forth.

No. 35,978.—J. H. and G. W. SMITH, of Portchester, N. Y., assignor to J. H. SMITH, aforesaid.—*Improvement in Tombstones.*—Patent dated July 22, 1862.—This invention consists in the use of channels leading from below through the bottom of the pedestal to the socket which receives the tablet, so that the sulphur or other material used for fastening the tablet in the pedestal can be poured in from below, and when the stone is in an erect position, no traces of the cementing operation will be visible.

Claim.—Introducing the sulphur or other cement generally used for securing together the tablets and pedestals of tombstones through channels *d*, passing up from the bottom of the pedestal, substantially in the manner and for the purpose herein shown and described.

No. 35,979.—C. C. STANSELL, of Middleboro', Mass., assignor to Himself and A. W. ROCKWOOD, of Newton, Mass.—*Improvemaut in Lamps.*—Patent dated July 22, 1862.—The flame adjuster is of tubular form and surrounds the wick where it projects above the lamp cap. Its upper end fits closely to the wick, but below this part it is formed with an annular cavity which serves to prevent the wick from being charred, and to prevent the adjuster from causing a too rapid vaporizing of the oil in the upper part of the wick.

Claim.—The above described arrangement of an annular flame adjuster *f*, with a stationary tubular wick D, and wick tube B, the whole being to operate together as specified.

Also, the combination of the flame adjuster F, in manner substantially as described, viz., with an annular space *g*, arranged around the wick and immediately below the part *f*, which presses against the wick, the same being for the purpose as hereinbefore specified.

No. 35,980.—C. H. GRIFFIN, of Lynn, Mass., assignor to W. D. RICHARDS, of the same place.—*Improved Apparatus for Grinding Ores and Amalgamating the Precious Metals.*—Patent dated July 22, 1862.—In this machine are employed an upper and lower table. Supported by a frame upon the upper table is a cast-iron cylinder open at both ends, and provided with necks which serve as journals. Within the cylinder are arranged two rubbers, which are made adjustable, so as to regulate the distance between their edges and the inner surface of the cylinder.

Under the discharge opening of the cylinder is arranged a hopper for receiving the pulverized material, and to the lower end of the hopper is attached a spout leading to a funnel-shaped basin G, which forms the mouth of a hollow shaft that conducts the material to the amalgamating tub, where it is subjected to the action of the mercury. The basin G is formed in two parts, the inner part forming a hollow cone inverted and closed at the bottom, so that the material in this part overflows, by means of centrifugal force as the basin is rotated, into the other or outer part of the basin. The inner surfaces of the basins are coated with mercury so as to attract particles of fine gold. At the lower part of the hollow shaft are secured three disks at short distances apart, the upper and lower ones being provided with arms or projections on their lower sides. The central disk is perforated, and is provided with arms on its upper side.

Claim.—First, the combination of the rotating cylinder D with the adjustable swinging rubber *h*, both being arranged, constructed, and operated in the manner substantially as and for the purposes described.

Second, in connexion with these, the hopper E and spout F, the double funnel-shaped basins G and G′, hollow shaft H, disk *m n* and *o*, as provided with arms *s* and *p*, and tub I, the whole being arranged, constructed, and operated in the manner substantially as and for the purposes set forth.

Third, in combination with the basins G and G′, the hollow shaft H, disk *m n* and *o*, and

Third, in combination with the basins G and G′, or their equivalents, and hollow shaft H, through which the ores to be amalgamated are passed and fed into the mercury, the arrangement of a series of disks *m n* and *o*, the upper and lower ones of which are provided with arms or stirrers, and the middle one with perforations, the whole being submerged in mercury, operating in the manner substantially as and for the purpose set forth.

No. 35,981.—WILLIAM REYNOLDS, of Manchester, N. H.—*Improvement in Looms.*—Patent dated July 22, 1862.—This invention consists in the employment of a grooved standard at one or both ends of the rail (curved or otherwise) for the purpose of holding the rocker upon the rail when it is worked by the picker staff to throw the shuttle. A roller is arranged in the stand next to the side of the loom, and, as the end of the rocker descends when the shuttle is thrown, it works under the roller so as to bring the curve M against the roller and partially under it, the roller being arranged to turn on a pin in a stand fastened to the rail.

Claim.—In combination with the rocker and rail a grooved standard at one or both ends of the rail, curved or otherwise, for the purpose of holding the rocker on the rail when it (the rocker) is worked to throw the shuttle, substantially as described.

Also, the roller L, in combination with the grooved standard K and rocker G, for the purpose set forth, substantially as described.

No. 35,982.—FERDINAND GARBER and SYLVANUS SHIMER, of Terre Haute, Ind.—*Improvement in Dirt Scrapers.*—Patent dated July 22, 1862.—This machine is composed of a frame having a wheel near its front part, a roller at the rear provided with curved levers, and a scraper connected with a trough, and is designed to be used for levelling and grading streets, roads, or fields, and distributing the loose earth or sand as may be necessary.

Claim.—First, a combination of wheel Z and roller G with its levers *b b* and braces.

Second, the scraper *a a′* and trough with their braces, all subserving the uses of scraping, levelling, and distributing, substantially as set forth.

No. 35,983.—SAMUEL KINGSLAND, of Lyndon, Wis.—*Improved Wood-bending Machine.*—Patent dated July 22, 1862.—Within a cylindrical casing of cast-iron or other suitable material is journalled a hollow cylinder made in two or more sections of different or decreasing diameters, in which is placed the fuel. The sections of the cylinder are supported upon a series of plates placed transversely across the casing. An outer plate extending above the cylinder, and corresponding to it in form, is made to support a series of feed rollers which are provided with pinions meshing into each other. The said plate is provided with projections and bevelled slots, in which are placed boxes that receive the journals of the feed rollers. By means of set screws on the said projections, in connexion with the boxes, the feed rollers may be adjusted to any desired position, by which means the wood in an unseasoned state, or, if seasoned, after having been soaked in water, may be bent in any desired form over the heated cylinder, and retained in that position until by a process of seasoning, it is caused to retain permanently the form imparted to it.

Claim.—First, the application to wood bending of hollow cylindrical forms, constructed, arranged, and operated as herein described.

Second, the construction and arrangement of the metal plates C C′ C″ in combination with the hollow cylinder A B, arranged thereon and secured together by the cross braces *a′ a′* and the cross tie *m′* with their journals and journal bearings, crank *c*, door *h*, draught hole *b*, and pipe *c*, all arranged in the manner and for the purpose specified.

Third, the peculiar means of adjustment for the feed rollers *a a a a* by means of the projections *n v* and *v′*, set screws *g*, and sliding boxes *m*, all being arranged, constructed, and operating in the manner and for the purpose described.

Fourth, a wood-bending machine combining a heated cylinder or cylindrical forms supported by plates C C′ C″, or equivalent means, with their means of adjustment, as described, supplied with fuel and heated in the manner described, and operated by a crank, or other equivalent means, substantially as and for the purpose specified.

No. 35,984.—JOHN A. BASSETT, of Salem, Mass.—*Improvement in Apparatus for Carburetting Gas.*—Patent dated July 29, 1862.—The burner with which the lamp is supplied is chambered and provided with a separate tip. From the top of the burner extending down through the outlet tube into the reservoir is a wick tube of braided lamp wicking, which is stretched over the top of the burner, leaving an opening into which the tip F is driven so as to render it gas-tight, thus confining the tube at the top of the burner and enclosing the lower part of the tip in a porous tube, through which the gas must pass to escape from the orifices of the burner.

Claim.—The arrangement, substantially as described, of a gas carburetting burner with the tube H of porous or textile material connected with the tip F of the burner, and in communication with a hydro-carbon reservoir, as set forth.

No. 35,985.—J. N. BAUMANN, of Muscatine, Iowa.—*Improvement in Cultivators.*—Patent dated July 29, 1862.—Near the rear part of the frame are secured two inclined standards provided with shovels at their lower ends. The upper ends of these standards are connected together by a cross-bar, to the centre of which is bolted a double tree having a draught chain

attached to each end extending to the front of the machine under pulleys. These pulleys are fitted in standards and so arranged in slides as to admit of being adjusted higher or lower, and so that the line of draught and depth of penetration of the shovels can be readily regulated by the operator. Near the centre of the frame is attached a cross-bar K, to which are connected bars provided with a series of horizontal rods for the purpose of protecting the plants from clods thrown up by the ploughs as well as breaking up the clods. This guard or clod crusher is made adjustable in position by moving the cross-bar K, and the bars which hold the rods may also be set at a greater or less distance apart, as required.

Claim.—First, the attaching of the double tree L to the cross-bar I of the standards G G when used in combination with the chains M M passing under adjustable pulleys N N, and a whiffletree P connected to each chain, substantially as and for the purpose set forth.

Second, the guard or clod crusher, consisting of the adjustable bars R R provided with parallel rods *o*, and attached to the bar Q, which is also adjustable and secured to the cross-bar K, as set forth.

No. 35,986.—M. S. BEACH, of Brooklyn, N. Y.—*Improvement in Stereotype Plates.*—Patent dated July 29, 1862.—The object of this invention is the production of a composite stereotype, of which one part is a stereotype or electrotype of the finer portions made by any approved process; and the other part is made from papier mache or other matrix, which receives and embodies in itself the first-named part. Use is also made of a movable and adjustable bed or block made of type metal or any other similar, substantial, and yet yielding material, *upon* which the stereotype is placed, and *under* which, instead of under the stereotype itself, the "underlays" are adjusted.

Claim.—First, the composite stereotype G, produced in the manner substantially as described.

Second, the use of an elastic substance E in connexion with the stereotype plate D and the matrix C, substantially as and for the purpose herein shown and described.

Third, the yielding block or bed H, constructed and used substantially as described.

No. 35,987.—J. A. BERTOLA, of New York, N. Y.—*Improved Amalgamator for Collecting Gold and Silver.*—Patent dated July 29, 1862.—This invention is designed as an improvement upon a machine patented to the said Bertola, October 20, 1857, and it consists in the employment of separate mullers connected to a cross-bar by means of links, whereby each muller is drawn along in the basin and readily accommodates itself to the material to be operated upon. The basins are made in the shape of a circular trough, and the shaft to which the crosshead is connected, is driven by gearing below the basin.

Claim.—The separate mullers *f f* attached by links *i* to the crosshead *k*, by which they are moved, in combination with the basin *e*, as and for the purposes specified.

Also, the basin *e*, formed in the manner specified, with the curved or trough-shaped bottom, and fitted so that the shaft *d* passes up through the centre, as and for the purposes set forth.

No. 30,988.—A. S. BLAKE, of Waterbury, Conn.—*Improvement in Weight and Lever Attachment for Doors and Gates.*—Patent dated July 29, 1862.—This invention consists in connecting a weight to a bent lever which is attached to the framing of the door or to the post of a gate, and connecting the said lever to the door or gate by means of a rod arranged in such a manner that the weight will cause the door to close, and also keep it open when thrown entirely back.

Claim.—The combination of the weight D, lever C, and rod E, applied to the door or gate to operate as and for the purpose set forth.

No. 35,989.—C. C. BRAND, of Norwich, Conn.—*Improvement in Fire-arms.*—Patent dated July 29, 1862.—This invention consists in the combination of a breech-pin sliding in a recess in the stock and the lock in such a manner that the two move together as the breech is opened or closed, while the stock remains permanently connected with the barrel. The front end of the breech-pin is guided in sliding towards and from the but of the barrel by means of a guide bolt which projects into a socket formed in the breech block beneath the barrel. The rear end of the breech-pin is maintained in position by means of a pair of guide screws, which prevent the breech-pin from rising from the bottom plate of the recess. The trigger guard is secured to the lower side of the breech-pin so as to guard the trigger in any position at all times.

Claim.—The combination of a breech-pin sliding toward and from the but of the barrel in a recess in the stock and a lock; the combination being such that the breech-pin and lock move together in the recess of the stock, substantially as set forth.

Also, the combination of the said breech-pin and lock with a guide bolt, substantially as set forth.

Also, the combination of the said breech-pin and lock with guide screws to guide the but of the breech-pin, substantially as set forth.

Also, the combination of the said breech-pin and lock with a trigger guard moving with them, substantially as set forth.

No. 35,990.—E. D. BURLINGAME, of Tecumseh, Mich.—*Improvement in Threshing Machines.*—Patent dated July 29, 1862.—This invention consists in the application to an ordinary

clover huller and cleaner, of two bolts, the front end of one overlapping the rear end of the

clover huller and cleaner, of two bolts, the front end of one overlapping the rear end of the other, and operated by a pitman, by means of which a longitudinal reciprocating movement is imparted to them so as to cause them to act as a carrier for the straw.

Claim.—The arrangement of the double bolts inside a box so as to allow the surface of each bolt to be used as a carrier of straw, and separator of seed and chaff from straw, constructed and operating as above described.

Also, the arrangement of double bolts inside a box so as to allow the surface of each bolt to be used as a carrier of straw, and separator of seed and chaff from straw, constructed and operating as above described, in combination with a machine for threshing and separating clover seed, constructed and operating as above described.

No. 35,991.—M. E. BURLINGAME, of Willett, N. Y.—*Improvement in Animal Fetters.*—Patent dated July 29, 1862.—This invention consists of a ring hinged at one part, and at the opposite part provided with projections which, when the ring is closed, form a cylinder. Upon this cylindrical part is fitted a ring D provided with recesses for the reception of projections on the cylinder. A second ring G, attached to a swivel and fitting within the ring D, is provided with a spiral spring, which serves to keep the parts in place and the fetter locked.

Claim.—The combination with the ring A of the rings C and D, spring G, and swivel E, constructed and operated substantially as described and set forth.

No. 35,992.—LORIN BURT, of the United States.—*Improvement in the Manufacture of Figured Rubber Cloth.*—Patent dated July 29, 1862.—This invention consists in passing the cloth between two rollers, from one of which it receives a coating of rubber upon one side, whence it passes between an engraved or printing cylinder and a plain one, upon which latter is laid a thin coating of gum at its junction with the printing cylinder, by which means a thin coating is brought upon both sides of the cloth and is made to adhere thereto in any figure determined by the pattern upon the engraved cylinder. The superfluous gum not impressed by the design is removed from the cloth by passing it over a cylinder having a slight coating of rubber.

Claim.—Impressing patterns in caoutchouc upon both sides of cloth, substantially in the manner and for the purpose set forth.

Also, removing the superfluous gum from the cloth by means of rollers, or their equivalent, as and for the purpose described.

No. 35,993.—NELSON CROSS, of New York, N. Y.—*Improved Folding Chair.*—Patent dated July 29, 1862.—This chair is formed of a series of slats composing the base, seat, and back, the parts being connected or jointed in such a manner as to admit of the chair being folded together in a small compass, and also to allow of the back being more or less inclined.

Claim.—The combination and arrangement of the seat and back with the movable or sliding arms and the arms rod, substantially as and for the purpose specified.

No. 35,994.—W. J. DODGE, of Kasoag, N. Y.—*Improvement in Car Couplings.*—Patent dated July 29, 1862.—The combined lock or guard and connecting lever are formed in one piece and pivoted towards the inner part of the bumper, so that when the guard is raised, the lever is thrown against the coupling and raises it off from a pin upon the bumper, the parts being so arranged as to be self-coupling when required, and to admit of their ready uncoupling and disconnexion when a leading car runs off the track.

Claim.—First, the combination of the lock *a* and connecting lever *e*, for the purposes and substantially in the manner set forth.

Second, the combination of the coupling *c* and governing clevis *e*, substantially as and for the purposes described.

Third, combining for joint action, as described, the coupling *c*, clevis *b*, lever *e*, and guard *a*, for the purposes substantially as specified.

Fourth, the arrangement of parts, as described, for the purpose of changing the connexion from a self-acting arrangement to a fixed connexion, substantially as set forth.

No. 35,995.—J. S. GILMAN, of Tecumseh, Mich.—*Improved Clasp for Harness Tugs.*—Patent dated July 29, 1862.—This invention consists in the employment of an oblong metallic box roughened on the inside, and through which the tug strap passes. A roughened metallic wedge is also placed within the box in contact with the strap. Through the front side of the box is inserted a screw which bears upon the wedge and serves to keep the tug in place and admit of its ready adjustment.

Claim.—The application of the screw pressure to the holding of the tug or large straps in and for harness, and more readily adjusting the same by means of the screw, metallic box, and wedge, as shown in the above specifications and the accompanying drawings, or in any other form substantially producing the same results.

No. 35,996.—J. B. DOOLITTLE, of Seymour, Conn.—*Improvement in Magazine Fire-arms.*—Patent dated July 29, 1862.—This invention consists in a construction of and mode of operating a series of chambers by which cartridges are received from one or more magazines in the stock of the fire-arm and conveyed to a point opposite the barrel to be fed.

Reference to the description and drawings will be necessary for an understanding of the invention.

Claim.—First, the combination in a fire-arm, in a manner substantially as herein described, of a cylinder constructed with a series of half chambers *c c*, and the sliding yoke E constructed with a single half chamber *b*.

Second, combining the yoke E and the dog G, which produces the rotation of the cylinder by means of a lever H, applied substantially as herein specified, with its fulcrum variable, in the manner set forth.

Third, the combination of the sliding tooth 13 in the yoke, and the fixed tooth 14 on the frame, substantially as and for the purpose herein specified.

Fourth, the combination of the radial grooves or notches *o o* in the front end of the cylinder and pin *m*, working through the front of the yoke substantially as herein described for the purpose of locking the cylinder.

Fifth, the hook *l'*, applied within the opening *a* of the frame A, in combination with the cylinder C, and operated by the yoke E, substantially as herein specified.

No. 35,997.—J. A. EDICK, of Newfane, N. Y.—*Improved Machine for Sawing Wood.*—Patent dated July 29, 1862.—This machine is composed of a framing having at the front end a guide standard I, in which is fitted a slide having a cleft or space of a sufficient size for the back of the saw to fit in, and serves by its weight to keep the saw in place as the latter cuts into the log. Near this standard is another standard G, having a slot provided with sliding blocks, in which the saw shank plays, and is properly guided. The position of the blocks may be adjusted higher or lower by means of pins. To the standard G is secured a cord extending to the rear end of the machine over the fly-wheel where it is attached to the upper end of a brake bearing upon the wheel, by which means the motion of the wheel, and consequently of the saw, can be regulated at the will of the attendant. Upon one side of the front end of the machine is a feeding roller, and at the other side, upon a bed or cross piece, is a gauge, consisting of a shank pivoted at its centre in any one of a set of adjusting holes in the bed. To the outer end of this shank is hinged an arm extending forward to about the centre of the end of the log. To the inner end of the shank of the gauge is attached a rod, secured to a sliding bar extending back, and attached at its rear end to a lever, which is operated by a sliding coupling which engages with a coupling upon a shaft deriving motion from the main shaft; by this arrangement the feed motion may be readily thrown in or out of operation by the attendant.

Claim.—The adjustable jointed gauge T, consisting of the shank *s*, and hinged arm *t*, when the same is connected with the coupling *c'* in such a manner that the latter is uncoupled by the action of the log in feeding; and so that the said hinged arm may be turned back for the removal of the cut, substantially as herein described.

Also, the removable guide standard I, provided with the supporting slide M, the brake O bearing on the fly-wheel, and operated by the cord N and the standard G, having sliding blocks H H, and pins for adjusting the saw; the whole arranged so that one attendant can manage the same without changing his position, and operating substantially as and for the purposes herein set forth.

No. 35,998.—BERNHARD FRANKE, of New York, N. Y.—*Improvement in Revolving Ordnance.*—Patent dated July 29, 1862.—The separate breeches of the rotating cylinder are held in place by means of a stop, the lower part of which is provided with a rack engaging with a pinion forming a part of the periphery of a shaft, and upon another part of the periphery is a finger *y*, which enters a notch in the breech piece, and moves the same into or out of the breech wheel as the shaft is turned. A circular plate I is secured to the top of the breech wheel for the purpose of covering all the nipples or vents except the one belonging to the breech which has been inserted in the barrel.

Claim.—First, the combination of the breech and the stop *o* with the finger *y* and the rack and pinion *r s*, operating substantially in the manner and for the purpose set forth.

Second, the combination of the plate I with the breeches and nipples, in the manner and for the purpose described.

No. 35,999.—G. W. B. GEDNEY, of New York, N. Y.—*Improvement in Revolving Fire-arms.*—Patent dated July 29, 1862.—In the frame of the arm behind the cylinder is inserted, without being screwed in, a single cone that fits closely against the rear of the cylinder, so that by removing the latter the cone can be readily slipped out of its seat at any time. Immediately behind the cylinder are connected to the frame, two springs, the ends of which are turned so as to take into radial grooves cut in the rear of the cylinder, and serve to press the cylinder against the barrel, and scrape off the gummy or dirty matter accumulated on the cylinder, and also to form a cut-off between the chamber to be exploded and the adjacent one. The pin upon which the cylinder is revolved is made hollow, so as to receive the priming. Through the pin is passed a plunger which, by means of an enclosed spring, forces the priming up into proper position where a cutter and carrier, actuated by the hammer, takes a slice or portion and raises it up to the path of the hammer, by which it is carried against the nipple and then

exploded. The priming is inserted through an opening in the frame into an opening in the

the draught-beam. At the front end of the tubular beam is arranged a slotted plate, through

exploded. The priming is inserted through an opening in the frame into an opening in the plunger when it is carried back by the latter into the chamber through which the cutter or carrier passes.

Claim.—First, setting the nipple loosely in the frame, and without connecting it permanently with any part of the arm, substantially as and for the purpose set forth.

Second, the double circular springs in rear of the cylinder, made as described, and attached to the frame as and for the purpose set forth.

Third, cutting off the priming at right angles with the position of the primer in the hollow cylinder pin, and carrying the same to the front of the hammer to be caught by the cup of the hammer face, under an arrangement of parts substantially such as set forth.

Fourth, in combination with a hollow cylinder pin for containing the priming, the openings *j o*, for the purpose of inserting the priming without withdrawing the cylinder pin or plunger, substantially as described.

Fifth, the spring, or its equivalent, on the under side of the barrel, for the purpose of keeping the cylinder pin and plunger in place, and allowing the latter to be withdrawn independent of the former, or both at once, substantially as set forth.

No. 36,000.—S. F. GOLD, of Brooklyn, N. Y., and W. A. FOSKETT, of Meriden, Conn.—*Improvement in Steam-heating Apparatus.*—Patent dated July 29, 1862.—The heating part of this apparatus is composed of a series of shallow chambers placed upon their edges, and united throughout by single joints surrounding the steam openings. The outer surfaces of these chambers are studded with conical projections arranged in rows, so that one row shall be opposite the spaces between the adjacent rows. The sectional chambers are constructed with central openings on their opposite faces for the admission of steam, each chamber consisting of a central passage, and lateral wings issuing therefrom. Each wing has a horizontal diaphragm D extending from the central opening to near the extremity of the wing, for the purpose of providing a circulation of steam through the chamber.

Claim.—Constructing the steam chambers in sections so united as to leave air channels between the adjacent sections, the surfaces of the sections constituting the sides of these channels being studded with regularly curved projections, arranged in rows, and breaking spaces in the direction opposed to the current, substantially as and for the purposes set forth.

Also, connecting the aforesaid flat sections centrally at the steam passage, whereby the radiator is made up of a main steam channel and lateral circulating passages, substantially as described.

Also, in combination with the central opening *d* the diaphragms D in the wings, as and for the purposes set forth.

No. 36,001.—THOMAS GOODREM and CHARLES JACKSON, of Providence, R. I.—*Improvement in Rotating Projectiles from Smooth-bored Ordnance.*—Patent dated July 29, 1862.—The projectile is provided with friction rollers arranged so as to protrude through slots in its sides from a cavity in its interior, so that the peripheries of the rollers will keep in contact with the bore of the gun, and their planes of rotation will be oblique to the axis of the bore and of the projectile. In the cavity of the projectile are springs or elastic beds arranged in relation to the bearings of the rollers, so as to hold them with sufficient force against the bore, and that in rolling in contact therewith they may run in a spiral direction, and cause the projectile to receive a rotary motion on its axis when discharged.

Claim.—First, having the rollers arranged to rotate obliquely in respect to the axis of the projectile, substantially as herein shown and described, so that the projectile as it moves through the gun will be caused to rotate, all as set forth.

Second, the combination of the rollers C with the levers B and follower D, substantially as herein shown and described.

Third, the elastic beds *h*, in combination with the rollers C and follower D, as herein shown and described.

No. 36,002.—W. H. GWYNNE, of White Plains, N. Y.—*Improvement in the Manufacture of Illuminating Gas.*—Patent dated July 29, 1862.—This invention consists in introducing into a heated retort filled with coal, wood, or other material, a stream of petroleum for the purpose of improving the quality of the gas, and also for producing a rich gas from the poorest quality of coal or wood, or other like material used in the manufacture of illuminating gas.

Claim.—Introducing into a retort containing coal, wood, or other material from which gas can be manufactured, a stream of petroleum or other liquid hydro-carbons, substantially in the manner and for the purpose described.

No. 36,003.—H. M. HALL, of Danby, Vt.—*Improvement in Shawl Pins.*—Patent dated July 29, 1862.—This device is formed of a hook-shaped pin with a straight shank, and provided at its end with a button or head.

Claim.—The hook in combination with the head, substantially as described, for the purposes herein set forth.

No. 36,004.—D. F. HUMPHREY, of Saline, Mich.—*Improvement in Ploughs.*—Patent dated July 29, 1862.—The beam of the plough is of tubular form, and near its end is pivoted

the draught-beam. At the front end of the tubular beam is arranged a slotted plate, through which the beam passes, and by means of a slide and bolt, the front end of the beam is allowed a vertical adjustment whereby the depth of penetration of the plough may be adjusted. The front standard of the land side is attached to the beam by means of a screw fitted in its upper side and secured by a nut placed in a recess in the beam. The rear standard is provided with a slotted horizontal plate through which and a lip on the rear end of the beam a bolt passes, by which means the rear standard may be moved laterally and adjusted in or out of line with the draught-beam, so as to give the plough more or less land as may be desired.

Claim.—First, the draught-rod B fitted in the tubular beam A and passing through the slot *d* in the front end thereof when arranged with the slide C and bolt *c*, substantially as and for the purpose set forth.

Second, attaching the standards D F of the land side H to the beam A by means of the screw or bolt E and the bolt *h*, the former being fitted directly in the beam A, and the latter passing through an oblong slot *g* in the plate G of the standard F, and through a lip *i* at the back end of the beam, substantially as and for the purpose set forth.

No. 36,005.—RODNEY HUNT and J. H. WAITE, of Orange, Mass.—*Improvement in Machinery for Fulling Cloth.*—Patent dated July 29, 1862.—Within a case are arranged two main horizontal squeezing rollers, one directly over the other, and in the rear of the main rollers are arranged one or more sets of smaller vertical rollers. At one side of the main case is affixed a box or cistern containing liquid soap, and having a pipe leading from it and made to open directly through the upper part of a curved folding passage arranged on the bottom of the main case. From the upper part of this folding passage is an inclined plane L extending to the curved surface of the lower main rollers and acting as a scraper to detach the cloth from the roller. A similar scraper M is applied to the upper roller. In front of the bite of the main rollers is a packing conduit, open at its front and rear ends, within which are placed two spring jaws, hinged at their rear ends to the opposite sides of the conduit, their front ends being in contact with each other.

Claim.—The combination of a soaping or liquoring cistern or apparatus separate from the main folding space K, with the said folding space and the two sets of main and auxiliary squeeze rollers A B F G.

Also, the arrangement of the two cloth guides or conducting partitions L M with the main squeeze rollers A B, their folding space K, spring jaws O O′, and packing conduit N, when combined with an auxiliary set of squeeze rollers or the same and a soaping or liquoring apparatus, and arranged in the case as explained.

Also, the arrangement of a pair of spring jaws O′ O′ and their packing conduit N, with the main and auxiliary sets of squeeze rollers, arranged in a case E, and so as to operate as described.

No. 35,006.—P. H. JACKSON, of New York, N. Y.—*Improved Vertical Windlasses.*—Patent dated July 29, 1862.—This invention is designed as an improvement upon a windlass patented to the said Jackson on April 1, 1862, and it consists in a method of stopping the chain-barrel so as to check the chain as given out or hold it rigidly when necessary. Upon the upper plate of the box which contains the gear-wheel is secured a lug, and on the side of the chain-wheel opposite the lug is a friction-clamp *k*, set so as to slide in a seat formed in the top of the said box. In the clamp *k* is a mortise in which is fitted an eccentric provided with a lever handle, by which the clamp may be pressed tightly against the edge of the chain-wheel.

Claim.—The friction-clamp *k*, actuated by the eccentric *o*, in combination with the lug *i*, to clamp and arrest the movement of the wheel *f*, substantially as and for the purposes specified.

Also, the overhanging end 5 in combination with the clamp *k*, wheel *f*, and box *a*, as specified, to press the said chain-wheel to the top of the box *a*, and increase the friction, as set forth.

Also, the pins 2 introduced through the base of the capstan *s* and keys 1, in combination with the said heaver *f*, to hold said keys in place, as set forth.

No. 36,007.—JOSEPH JONES, of Utica, N. Y.—*Improvement in Railroad Car Brakes.*—Patent dated July 29, 1862.—The brake-rubbers are made to operate upon the upper part of the wheel, and are secured to the ends of bent shafts *b* which are hung in bearings upon the ends of thorough springs fastened at their centres to the truck frame. Underneath the truck frame is a yoke suspended at its opposite ends to the bent shafts *f*. The brakes are operated from a central point by means of a cam lever bearing upon the yoke *f* in connexion with a windlass and chain.

Claim.—First, the combination of the thorough springs *d* with the bent shafts *b*, connected and operating substantially in the manner and for the purpose herein described.

Second, the central yoke *f* and its connexions with the bent shaft *b*, as described.

Third, the central action at W, by means of the cam and lever *i*, operating on the yoke *f*, at a point central to the four wheels of the truck, by means of which all the rubbers are brought down upon the wheels by a simultaneous and perpendicular pressure.

The whole being arranged and operating substantially in the manner herein set for-

No. 36,008.—HENRI J. KRITZER, of Albion, Mich.—*Improvement in Hot-Air Engines.*—

No. 36,008.—HENRI J. KRITZER, of Albion, Mich.—*Improvement in Hot-Air Engines.*—Patent dated July 29, 1862.—The nature and object of this invention will be mainly understood from the claim and engraving. To the bottom of the piston are attached sprinkling tubes formed of light metal with perforated sides, so that at each descent of the piston it will be filled with sufficient water from the lower part of the cylinder D^2 to continue the shower without interruption.

Claim.—First, the combined arrangement, substantially as described, of the pair of connected heating and condensing cylinders D' D^2, condensing float-pistons J J, lifting-rods M M, and water-ports F F for the purpose of interposing a body of cold water or other suitable fluid between the condensing and working piston, to lubricate the working parts, facilitate condensation, and to allow the air-chambers to be permanently charged, without risk of loss by leakage.

Second, the use of the sprinkling troughs L L in combination with the arrangement aforesaid, substantially as and for the purpose specified.

No. 36,009.—W. J. LEMUTH, of Greencastle, Ind.—*Improvement in Balancing Millstones.*—Patent dated July 29, 1862.—This invention consists in placing a number of sliding weights in recesses in the back of the upper stone or runner and in line with the top of the spindle on which the stone rests, whereby the latter may be perfectly balanced while in motion and under any rate of speed. The weights are adjusted by means of screws passing through them and through the hoop of the stone.

Claim.—The employment or use of adjustable weights F fitted in or applied to the runner A of a pair of millstones, in such a manner as to be capable of being adjusted horizontally nearer to or further from the centre of the runner, and in line with the top of the spindle of the same, as and for the purpose herein set forth.

No. 36,010.—W. A. LIGHTHALL, of New York, N. Y.—*Improved Combined Heater, Condenser and Filter.*—Patent dated July 29, 1862.—The object of this invention is to make potable water from salt or other impotable water, and it consists of an apparatus composed of a filter placed in the lower portion, and filled with charcoal for the purpose of abstracting from the condensed water run into it its empyreumatic qualities. Above the filter is placed a tank which holds the condensed water, and over that is the condenser. Attached to the top of the condenser is a heater containing a series of pipes through which the feed-water is passed from the feed-pump to the boiler, and into which steam is exhausted from the feeding, cooling, and supply pumps.

Claim.—The combination of the tank N, filter B, condenser F, and heater G, when arranged in relation to each other in the manner and for the purpose herein set forth.

No 36,011.—WILLIAM MATTHEWS, of New York, N. Y.—*Improvement in Photographic Albums.*—Patent dated July 29, 1862.—This invention consists in the employment of a frame in which the pictures are inserted, and which frame can be readily inserted within and withdrawn from the leaves of an album.

Claim.—So constructing a photographic frame, such as described, that it may be withdrawn from the leaf of the album to insert the picture, as described.

Second, the photographic frame in combination with the album leaf, as in the manner specified.

No. 36,012.—T. W. MCFARLAND, of Ottawa, Ill.—*Improved Evaporator for Saccharine Juices.*—Patent dated July 29, 1862.—This invention consists in the construction of an evaporator for saccharine juices, so arranged as to be readily adapted to any of the fire-pans now in use. Below the pan is an open flue, communicating directly with the chimney, and under the flue is a sliding tube or flexible joint so arranged as to admit of its being easily adjusted to the positions of the oscillating pan. To the front of the pan is secured a strainer *e* of medium fineness, and opposite to this strainer and secured to the frame-work is a conductor provided at its outer end with a bag-shaped strainer of a finer quality. A damper is so arranged in connexion with the flues as to conduct the volume of heat directly to the chimney when necessary.

Claim.—First, in combination with a fire-pan, the employment or use of a pan constructed substantially as is set forth, and for the purpose substantially as described.

Second, in combination with an oscillating fire-pan, or a pan having an oscillating motion, a movable or sliding joint, as at *c h*, that the motion of the one may conform to the stationary position of the other, substantially as set forth, and for the purposes as described.

Third, the arrangement of the strainers *e f*, in combination with the conductor *d*, and the box or pan to which they are attached, substantially as set forth, and for the purposes as are described.

Fourth, the arrangement of the damper *b* in combination with the flexible tubes *c h*, the flues *a a a*, and the open flue I, substantially as set forth, and for the purpose herein expressed.

No. 36,013.—JAMES MCKENZIE and J. C. MILLAR, of Troy, N. Y.—*Improvement in Fulling Mills.*—Patent dated July 29, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—First, the fulling plates F and F', when combined one with the other, and having, respectively, reciprocating motions in opposite directions, the uppermost plate having a variable pressure or frictional contact on the cloth's surface, as herein described, both plates being arranged and operating substantially in the manner and for the purposes as herein set forth and shown.

Second, in combination with the fulling plates F and F', the feed and drawing rollers *u* and *v* and the series of fulling rollers *d d* and *d' d'*, the frame carrying the rollers *d' d'* having a reciprocating motion given to it in horizontal directions, and being adjustable vertically as described, the whole arranged and operating in combination with the fulling plates, substantially in the manner and for the purposes as herein specified and shown.

Third, arranging and mounting the uppermost fulling plate F' and the lower series of fulling rollers *d' d'* in frames that may be adjusted vertically in or upon guides, so that the contact or pressure of the plate and rollers may be duly regulated to the amount necessary, by means of levers and weights, in the manner and for the purposes as herein specified.

No. 36,014.—J. H. MEISSNER, of Jersey City, N. J.—*Improvement in Bolts.*—Patent dated July 29, 1862.—This invention consists in making the body or shank of the bolt of a number of wires, so twisted or placed together that while the bolt shall have all the requisite tensible strength, it shall also possess a certain degree of elasticity, for the purpose of obviating the injurious effects caused by the impact of heavy projectiles upon the plate.

Claim.—The method of constructing a screw bolt of wire in such a manner that with a solid screw and proper head the shank or intermediate portion shall retain a certain degree of elasticity not possessed by an ordinary solid bolt.

No. 36,015.—G. P. MERRIAM, of Lynn, Mass.—*Improvement in Machines for Forming, Smoothing, and Polishing the Heels of Boots and Shoes.*—Patent dated July 29, 1862.—This invention consists in shaping and dressing the heels of boots and shoes in pairs, after they have been attached to the boot or shoe, by means of a rotating cutter or polisher, with which is connected a guide ring for receiving a guide plate which is clamped between the two heels of a pair of boots or shoes held sole to sole Pattern plates are also placed on the bottoms of the heels, up to which the cutter works, so as to leave, when removed, the heel with a well-defined and finished shape.

Claim.—Shaping and dressing the heels of boots and shoes, in pairs, by means of a revolving cutter or polisher, with its grooved ring, in combination with patterns N, secured to the heels, and the guide plate O, operating substantially as described.

No. 36,016.—C. A. MURRAY, of Pittsburg, Pa.—*Improvement in Piston Packing.*—Patent dated July 29, 1862.—Upon the interior of the ordinary packing rings are arranged four segmental rings, which are connected by means of springs with the sections of a conical socket in such a manner that by the expansion of the said socket the segmental rings are made to bear upon the inner surface of the packing rings with a yielding pressure, thereby keeping the said rings tight without injury to the inner surface of the cylinder. At the head of the screw which serves to operate the conic frustum, through the entrance of which the segmental rings are expanded, is arranged a collar in such a manner as to bear steam-tight against the inner surface of a disk that is attached by means of screws to the follower, and serves to keep the collar in its place.

Claim.—First, the arrangement of the springs F, in combination with the split hub G, provided with the conical socket *a*, segmental rings E, and packing rings D, all constructed and operating substantially as and for the purpose described.

Second, the arrangement of the collar *d* on the head of the screw I, in combination with the disk *e*, as and for the purpose set forth.

No. 36,017.—CYRUS NEWHALL, of Hinsdale, N. H.—*Improvement in Harvesters.*—Patent dated July 29, 1862.—Attached to the main frame is a frame F formed of two rods connected by a cross-bar, and extending down between the two lower arms of the four which are attached to a projecting end of the axle. These arms are each provided with a roller at its end, upon which is placed a rim C', constituting one of the wheels of the axle. To the lower end of the frame F is attached by joints a shoe, to which is connected a finger-bar so arranged as to admit of being elevated to a vertical position when the machine is moved from place to place. By this arrangement the sickle will rise and fall simultaneously with the wheels, so as to conform to the irregularities of the surface of the ground, and thereby insure a uniform cut.

Claim.—The arrangement of the frame F, constructed as shown, with the rim C, shoe G, and the main frame A, in the manner herein shown and described.

No. 36,018.—CHARLES OHLEMACHER, of Aurora, Ill.—*Improvement in Springs to Car Trucks.*—Patent dated July 29, 1862.—Placed loosely between two cross-bars at the centre of the truck is a sill or centre beam having two elliptical springs attached to its under side. These springs are connected at their lower part to a cross-bar, the ends of which are provided

with journals fitted in oblong slots in the adjoining ends of two levers E′, so as to form a joint for the same. These levers are attached to cross-bars, the ends of which are fitted in the lower part of pendants suspended from cross-bars of the truck. At each side of the truck are also two levers F, fulcrumed in pendants attached to the truck frame, the outer ends of which bear upon the boxes of the wheel axles, by which means the weight of the car will be transmitted equally to the springs when the car is oscillating from one side to the other.

Claim.—The combination of one system of springs D with a sill or centre beam C, and three systems of levers E′ E′ F F, arranged and applied to the car truck, to operate as and for the purpose herein set forth.

No. 36,019.—J. S. PADON, of Summerfield, Ill.—*Improvement in Cultivators.*—Patent dated July 29, 1862.—Underneath the front end of the main frame is pivoted a frame C, which is connected by a link to a lever, pivoted to the main frame, and by means of which the plough is rendered adjustable to or from the ground. The beam F, to which the plough and cultivator are attached, is pivoted to the rear end of the adjustable frame C, and admits of being turned so as to use either the plough or cultivator end, as may be desired.

Claim.—The arrangement of the adjustable frames C, and beams F and G, in respect to each and under the main frame B, when constructed and operated in the manner described and shown.

No. 36,020.—A. G. PARKER, of North Gage, N. Y.—*Improvement in Corn Planters.*—Patent dated July 29, 1862.—This machine is supported upon three wheels, the two forward ones of which are placed loosely upon a revolving shaft, and serve to mark the rows in which the seed is dropped. Connected with these wheels are drag shafts, having an orifice near their centres, into which are fitted spouts which conduct the corn from the hopper to the ground, the drag shafts covering the corn as it is dropped into the ground. The rear part of the machine is supported by a single wheel provided with pins, projecting from one side of the rim. These pins, as the wheel rotates, actuate a lever which, by means of two intermediate levers connecting with a rock shaft, serves to operate slides in the lower part of the hopper, so as to cause the corn to be dropped in separate hills.

Claim.—First, the combination of the adjustable furrow wheels D, and drag bars G, with the movable seed boxes A, when constructed and arranged in the manner and for the purpose set forth.

Second, the combination of the wheel C, provided with the movable pins *y*, with the levers *z* 2 3, rock shaft 4, and movable arms S, when the whole are constructed and arranged in the manner and for the purpose set forth.

No. 36,021.—J. W. PARMENTER, of New York, N. Y.—*Improvement in Trunks.*—Patent dated July 29, 1862.—This invention consists in providing a common travelling trunk with a series of drawers having folding bottoms, and also having a hinged removable front, all so arranged that any one of the drawers may be used separately, or that all or any one of the drawers may have its bottom folded so that two or more apartments may be thrown into one.

Claim.—A trunk composed of a series of drawers, or one or more, placed within a suitable case, and provided with folding bottoms, substantially as and for the purpose specified.

No. 36,022.—D. C. PAYNE, of Elkhart, Ind.—*Improvement in Grubbing Machines.*—Patent dated July 29, 1862.—This invention consists in an arrangement of devices for automatically locking and unlocking the wheels of the machine at the proper moment, by which the wheels are caused, in connexion with the axle, to form the fulcrum of the lever, and also to allow the machine to be used for transporting the grub or stump from the field.

Claim.—The lever A, lock bar E, hooked arm *a*, and weight F with the annular-toothed rims D D′, wheels C′ C′, and crooked axle B, when combined and arranged to operate in the manner and for the purpose set forth.

No. 36,023.—J. C. PHILBROOK, of East Sanbornton, N. H.—*Improvement in Apparatus for Filling Sacks with Flour.*—Patent dated July 29, 1862.—This invention consists in the employment of a hopper provided with hooks at its under side for the attachment of the bags, and supported by means of journals at its ends to a folding stand, the object being to obtain an apparatus that can be folded in a compact form when not in use, or for transportation.

Claim.—The said portable folding bag, supporting and filling apparatus, consisting of the hopper and two sets of legs, as arranged and applied in manner and so as to operate together, and for the purpose substantially as hereinbefore specified.

No. 36,024.—J. A. PIMENTEL and W. H. SHUTE, of New York, N. Y.—*Improvement in Locks.*—Patent dated July 29, 1862.—This invention consists in the employment of a bolt guard arranged with a division plate in the lock and the lock bolt, and using in connexion with the said parts a double key. Within the lock are placed spring catches arranged so as to hold a pick or false key which may be introduced into the lock for the purpose of unlocking it illegitimately.

Claim.—First, the slide or guard D, in combination with the bolt B and central partition plate C, arranged substantially as and for the purpose set forth.

Second, the spring catches or stops *m p*, arranged to operate as and for the purpose specified.

Third, the double key K, or one formed of two parts *e f*, provided each with a bit *g j*, and arranged as shown, to turn independently of each other, when said key is used in connexion with a lock provided with a bolt B, slide or guard D, and central plate C, for the purpose set forth.

No. 36,025.—J. H. POST, of Paterson, N. J.—*Improved Sawing, Boring, Moulding, and Planing Machine.*—Patent dated July 29, 1862.—The nature and object of this invention are explained by the claim.

Claim.—The combination with the mandrel or shaft, upon which the cutter head is hung, and with the cutter head, of the right and left hand screw-threads and corresponding nuts, by which the cutter head may be adjusted to the proper position on the shaft, and also held in position by the screws and nuts, the parts being so constructed and arranged that the resistance of the material will have a tendency to decrease the distance between them by means of the friction of the cutter head upon them, and thus secure the cutter head more firmly in position, and also thereby avoiding the necessity of jam nuts or other appliances to secure the nuts which hold the cutter head in adjustment from displacement, substantially as set forth.

No. 36,026.—H. T. PRATT, of Fitchburg, Mass.—*Improved Seats and Backs for Chairs.*—Patent dated July 29, 1862.—This invention consists of a thin sheet of wood in which is cut a number of slots so as to form a series of thin narrow slats, and attaching the same to the frame of the back or seat of a chair.

Claim.—The employment or use of a thin sheet B of wood, provided with narrow slots *a*, in combination with the frame of a seat or back of a chair or other similar article, substantially as and for the purpose herein shown and described.

No. 36,027.—B. D. REED, of Independence, Iowa.—*Improved Fastening for Securing Traces to Whiffletrees.*—Patent dated July 29, 1862.—This invention consists in attaching to the trace loop a metal tube, within which is placed a pin C provided with a spiral spring. The narrow end of the trace loop is of sufficient size to receive the end of an arm or rod which is connected to the end of the whiffletree, and into this arm the pin C is forced by the spiral spring, by which it is retained in the loop. By withdrawing the pin C the parts become at once disconnected.

Claim.—As an improved article of manufacture, a trace loop or cock-eye, provided with a tube B and spring C, and otherwise made as herein shown and described.

No. 36,028.—COLEMAN SELLERS, of Philadelphia, Pa.—*Machine for Rolling Photographic Pictures, &c.*—Patent dated July 29, 1862.—In this device the ordinary housing or supporting frame of the pair of rolls is dispensed with, and the lower roll is made so large that only a portion of its circumference is used in the rolling operation. The lower roll is also made stationary, and the upper roll is caused to pass around that portion of it designed for use. The lever or crank is used as a support for the upper roll in place of the housing generally employed for that purpose.

Claim.—The rotation of the polishing roll or its equivalent about the large roll or its equivalent, substantially in the manner and for the purpose specified.

No. 36,029.—SILAS SHEPARD, of Taunton, Mass.—*Improvement in Looms.*—Patent dated July 29, 1862.—Upon the yarn beam, which is arranged in the usual manner, is affixed a spur gear engaging with a smaller spur gear upon a horizontal shaft K, which works in a fixed bearing secured to the side framing of the loom, the said shaft carrying outside of the framing, a wheel L provided with teeth, which, in connexion with a double detent lever, constitutes an escapement mechanism to prevent the said wheel from moving more than one tooth at a time. C represents a vibrating whip roll supported by two arms of a rock shaft, which is arranged in fixed bearings above the yarn beam. Near one end of this arm is a three-armed lever, one arm E of which has suspended from it a weight sufficient to counterbalance the weight of the whip roll and the downward pressure produced on the roll by the tension of the warp between the yarn beam and the take-up. From the arm F of the said lever is suspended a rod I which works through a guide in the framing. The third arm G is fitted with a screw *e* which comes in contact with a fixed stop on the framing, and serves to limit the height to which the weight is allowed to raise the whip roll. By adjusting this screw, the height of the weight may be regulated.

Claim.—The combination with the escapement mechanism L M and the yarn beam B of the shank K, gear J, three-armed weighted adjustable lever E F G, rock shaft D, the adjuster *e*, rod P, and whip roll C, in the manner and for the purpose herein shown and described.

No. 36,030.—DAVID SHIVE, of Philadelphia, Pa.—*Improved Egg Beater.*—Patent dated July 29, 1862.—This invention relates to a device in which two agitators are arranged to rotate one within the other in opposite directions, and it consists in the employment of a pair

of slender cylinders or rolls, arranged parallel with each other in a suitable frame, and in connexion with the said agitators, so that the rotary motion of the latter may be effected by simply rolling or rubbing the cylinders between the hands.

Claim.—Operating the agitators C and D, or their equivalents, by means of cylinders B B′, arranged to be rolled or rubbed together between one's hands, substantially in the manner described.

No. 36,031.—CHRISTIAN SHOLL, of Mount Joy, Pa.—*Improved Sash Fastener.*—Patent dated July 29, 1862.—Within a recess in the window frame is fitted a metallic plate provided with a wheel or roller. Passing through the plate at each end and into the frame are screws surrounded with coiled springs which press against the plate and serve to retain the window frame in an elevated posotion at any desired height.

Claim.—The arrangement of the plate C, rollers *a*, screws *x x*, and spring *m m*, used in the box in the frame, and in combination with the grooved sash, as and for the purpose specified.

No. 36,032.—AARON SHUTE, of Flushing, N. Y.—*Improvement in Fire Escapes.*—Patent dated July 29, 1862.—This invention is designed as an improvement upon an apparatus patented to the said Shute, November 12, 1861, and consists in the employment of a flexible ladder attached to a reel placed within a box, which latter may be secured to the roof of a building near the eaves. At the front end of the box is a door which is kept closed by means of hooks, and by means of bars actuated by levers and a rod in connexion with springs, the door is opened when necessary, and the end of the flexible ladder caused to escape from the box and falling to the ground is there secured.

Claim.—The flexible ladder F, in combination with the reel D and box A provided with the door C, all arranged to operate as and for the purpose herein set forth.

Further, the particular manner of closing the door C, securing it in a closed state, and releasing it, to wit: by means of the hooks *h h* attached to the bars K actuated through the medium of the arms *j*, levers L, rod M, and spring or springs N, in connexion with the cross-bar G at the end of the flexible ladder F, as herein described.

No. 36,033.—W. W. SIMRELL, of Great Bend, Pa.—*Improvement in Axle Boxes for Railroad Cars.*—Patent dated July 29, 1862.—This invention will be understood by reference to the claim and engraving.

Claim.—The combination of the oil cup C with holes *o′ o″ o‴*, with the support B upon journal J with holes *h h*, when used for the purposes of lubricating the journal J when surrounded by the space *p p p*, widened at the sides of said journal and contracted under the same to keep the packing from shrinking away from the journal, in manner and for the purpose herein described.

No. 36,034.—DANIEL SNELL, of Little Falls, N. Y.—*Improvement in Harvesters.*—Patent dated July 29, 1862.—Connected by a shaft to the main driving wheel is a small wheel H which actuates the cutters and is provided with three sets or pairs of spuds or pins which take into slots in a yoke as the wheel rotates, in such a manner as to give a greater range of vibration or stroke to the cutters than when one pin only is used. To the shaft of the spud wheel is hung at one end an extension bar, and to the opposite or grain side of the same is secured through the intervention of a shoe a finger-bar which carries the fingers or guard *l*, through which the cutter vibrates.

Claim.—First, the combination of the wheel H and yoke I, with their pins and slots for vibrating the cutters, substantially in the manner and for the purpose set forth.

Also, in combination with the finger-bar, its alternate projections and openings, the guards *l* made as described, with the cutter-bar and cutter resting thereon, in manner and for the purpose set forth.

No. 36,035.—E. S. SNELL, of North Bridgwater, Mass.—*Improved Boot Heel Shave.*—Patent dated July 29, 1862.—This invention consists in a method of attaching the blade to the stock so that it can be readily adjusted. The throat guard C has at each end a bent arm which fits in a recess in the under side of the stock, and is held in place by a screw passing through a slot in each end of the guard from the under side of the stock, which permits the guard to be moved towards and from the blade to adjust the opening between the guard and edge of the blade.

Claim.—The above-described boot heel shave, consisting of the blade B, capable of being raised and lowered in the stock A in the manner described, in combination with the throat guard C which may be moved towards and from the blade B, and be secured in position by the screws *g* and slots *i*, substantially in the manner specified.

Second, the arms *e* of the guard C and the recesses *f* in the stock for steadying the guard, as set forth.

No. 36,036.—WILLIAM STOW, of Utica, N. Y.—*Improvement in Breech-loading Ordnance.*—Patent dated July 29, 1862.—This invention consists in a certain construction of the carriage for the support of the breech and the barrel or body of the gun; also in a mode

of combining the barrel of the gun with the carriage whereby its rear end is made to move away from the breech in its upward movement therefrom; and also in a means of moving the barrel from and to the breech piece for loading and firing, and of securing the barrel during the discharge of the gun.

Claim.—First, the carriage composed of the rigidly connected side pieces A A, cross-piece A′, axle B, and trail piece C, and the side pieces D D, swinging on the axle and carrying the breech piece F, substantially as herein described.

Second, the lever J and catch K applied in combination with each other and with the body H, and portion of the carriage to which the fixed breech piece is secured, substantially as herein specified.

Third, securing the swinging body H to the fixed breech piece E during the discharge of the gun by means of lugs I I on the body, and notches for their reception in the parts D D of the carriage, to which the breech piece is rigidly secured, substantially as herein described.

No. 36,037.—B. F. STURTEVANT, of Boston, Mass.—*Improvement in Fuze for Explosive Shells.*—Patent dated July 29, 1862.—Within the chamber of a fuze plug, which is constructed in the ordinary manner, is screwed a cylindrical tube or plunger carrier, the threads of the screw of the latter being much smaller than those upon the outside of the plug, by which such plug is secured to the shell. The carrier is provided with a head through which are any suitable number of flame ducts, and projecting downward from the head is a bifurcated tongue or friction discharger which enters the cap D of a cylindrical bell or hollow plunger. A priming or composition that will ignite by friction is placed in the cap D, and around the prongs of the discharger, so that as the discharger is drawn through the cap in the flight of the shell, the priming will be ignited, and the flame be transmitted to the charge in the main chamber, and thence to the top of the time fuze.

Claim.—In combination with the fuze plug A, a device which shall enter the same, and so extend beyond or out of its mouth, that on impact against an object during the flight of a shell in which the plug may be, such device may be driven into the plug, and caused to so cut or break it as to enable the flame proceeding from the upper or burning end of the fuze to enter the charge chamber of the shell, as specified.

No. 36,038.—B. F. STURTEVANT, of Boston, Mass.—*Improvement in Fuze for Explosive Shells.*—Patent dated July 29, 1862.—The fuze case or plug is provided with a tapering socket for the reception of the fuze. A cylindrical chambered plunger is fitted closely within a chamber of the case B. The lower end of the plunger is open and made with a thin flexible edge, in order that when the plunger is driven back against the shoulder of the fuze case, it may bend up or be upset. The chamber of the cap is continued down so as to open in the chamber of the plunger, by means of a flexible flanch, which, after the chamber *g* of the cap has been supplied with fulminating or friction composition, may be bent down or upset so as to close the mouth of the said chamber *g*. Extending from the plunger case in the cap is a metallic bifurcated tongue consisting of a strip of metal bent so as to have two prongs and a head, and so arranged that in the act of discharging the shell, the fuze case and plunger will be driven forward, causing the tongue to be drawn quickly through the cap so as to ignite the priming, when the bottom of the chamber *g* will burst open and communicate fire to the top of the fuze in the socket.

Claim.—An explosive friction apparatus or a plunger, a friction composition chamber, a plunger case and a friction tongue, combined and arranged so as to be applied to a fuze plug and its fuze, and operate therewith in manner and under circumstances substantially as hereinbefore set forth.

Also, the plunger, as made with an open bottom and a thin, flexible edge or lower part, capable of being upset or bent, so as not to cut through the shoulder or walls of the fuze plug, under the blow of the shoulder imparted to the lower end of the plunger at the period of the discharge of a shell from a gun, as specified.

Also, the extension of the chamber *g* into the chamber *d′*, by means of a flexible annular flanch *f*, capable of being upset, so as to close the mouth of the chamber *g*, as above explained.

Also, the friction tongue, as made with two or more rasping prongs, arranged substantially as described.

Also, the arrangement of the walls of the plunger with respect to the shoulder *c*, and the fuze socket *a*, substantially as described, in order that the plunger, or any portion thereof, may not, at the period of the discharge of a shell from a gun, cause the fuze to be disarranged or driven backward in or through its socket.

No. 36,039.—B. F. STURTEVANT, of Boston, Mass.—*Improvement in Fuze for Explosive Shells.*—Patent dated July 29, 1862.—This invention consists in constructing the flame eduction passages so as to throw the flame of the friction priming in radial jets in such a manner as to cause it to fall upon and around the entire upper surface of the fuze composition case while the shell is in motion.

Claim.—Combining with the channelled head of the fuze case, and the part B thereof, one or more eduction passages *e e e*, so arranged and formed in the part B as to discharge the flame of the priming, either directly upon the entire surface of the cap of the fuze composition, or so that it may be forced thereupon by the resistance of the atmosphere, under circumstances substantially as set forth.

No. 36,040.—BENJAMIN F. TAFT, of Blackstone, Mass.—*Improvement in Pessaries.*—Patent dated July 29, 1862.—The nature of this invention will be understood by reference to the claim and engraving.

Claim.—The ball and socket movement of the pessary in the stem and the slide motion and method of adapting it to different individuals, so that the womb can be elevated to any required height.

No. 36,041.—THOMAS R. TAYLOR, of Cleveland, Ohio.—*Improvement in Machines for Making Horseshoes.*—Patent dated July 29, 1862.—This invention is designed as an improvement in a machine patented to the said Taylor on April 3, 1860, and it consists in a construction and arrangement of dies and swedges with a method of operating the same conjointly by means of cams and levers, for the purpose of forming shoes by one continuous operation of the machine, at every complete revolution of which, it is capable of producing one shoe.

Claim.—First, the combination of the reciprocating die R and swedges *a a*, arranged and operating conjointly in the manner and for the purpose specified.

Second, the cam levers *d d* pivoted to the arm T, in combination with the swedges *a a*, arranged and operating as and for the purpose set forth.

Third, the cams *j j* and *j'* and cam slot *k*, in combination with the cam S, slide U, and arm T, arranged and operating as and for the purpose described.

No. 36,042.—JAMES E. THORP, of New York, N. Y.—*Improvement in Pumps.*—Patent dated July 29, 1862.—This invention consists in placing the two induction valves and their seats within the same cylindrical box or bore arranged transversely to the cylinder, a partition being provided in the said box or bore to form two section chambers. The eduction valves are placed in a similar box without a partition between them, but with a guard so arranged as to serve for both valves, the said box forming a discharge chamber for both ends of the cylinder and connecting both with the discharge pipe.

Claim.—First, the arrangement of the two induction valves or two eduction valves, or each two in one cylindrical or other circular box or bore situated transversely to the bore of the cylinder, substantially as and for the purpose herein specified.

Second, the bushes B and C, each containing two valve seats and an interposed partition *f* or guard *g*, applied in combination with the said transversely situated boxes or bores, substantially as herein set forth.

No. 36,043.—C. F. WALKER, of Benford's Store, Pa.—*Improvement in Horse Rakes.*—Patent dated July 29, 1862.—The driver's seat is attached to the axle above, and the curved rake teeth are also attached directly to the axle. The thills are connected to the axle by straps or clips so as to allow it to turn freely to a certain extent. To the outer sides of the back part of the thills are attached levers connected at their lower ends to the axle. The parts are so arranged and connected that as the driver occupies the seat in an upright position, the ends of the teeth will be in contact with the surface of the ground and rake up the hay. When the requisite quantity of hay is collected, the driver, by a forward inclination of his body, causes the axle to turn so as to raise the teeth and discharge the hay. At the same time a bar or clearer is forced back and insures the discharge of the load.

Claim.—The combination of the axle A, teeth E, thills C C, and seat D, when arranged to operate as and for the purpose set forth.

Further, the bar or clearer H, when connected to the axle A and thills C C, and arranged to operate by the movement of the seat D, in conjunction with the teeth E, as and for the purpose set forth.

No. 36,044.—W. WESTLAKE, of Milwaukie, Wis.—*Improvement in Heaters for Railroad Cars.*—Patent dated July 29, 1862.—The heating apparatus is intended to be placed underneath and attached to the bottom of the car, and the invention consists in an arrangement of pipes and dampers for supplying air to the heater in all conditions of motion or rest of the car.

Claim.—The wind chamber *g*, having the valve *h*, with its spindle *i* and flanges *j*, in combination with the air pipe *f*, constructed and operating as described.

Second, the swinging damper *g* and the pipes *o*, with the valves *p*, in combination with the air pipe *f* and air space *d* and the smoke pipe *e*, as and for the purposes described.

Third, the lips *n*, for deflecting the air against the fire-box, as set forth.

Fourth, the arrangement of the means or devices for operating the draught slide plate *z* from the interior of the car, as set forth.

No. 36,045.—T. N. WHEELER, of Rio, Wis.—*Improvement in Grain Registers.*—Patent dated July 29, 1862.—This invention consists in the employment of a measure of any given capacity fitted to slide within a box or chamber, and which, as it moves along, is caused to come in contact with the projecting end of a lever. The motion of the lever is made to actuate a pawl and ratchet connected by proper gearing to the index of a dial-plate, upon which latter is marked the units of measure. As the lever is released from the measure, it is drawn back again by means of a spring, when the operation is repeated.

Claim.—The registering of grain measures by means of lever C, spring K, and sliding measure *a*, substantially as herein set forth.

No. 36,046.—HENRY WILLIAMS, of Chicago, Ill.—*Improvement in Corn Harvesters.*—Patent dated July 29, 1862.—Reference to the specification and drawings will be necessary for a description of this invention.

Claim.—First, the revolving tables, consisting of the shafts F F' F'' F''', in combination with the arrangement by which the revolving motion, or the stopping of the revolving motion, or the stopping of the revolving shafts F' F'', at the pleasure of the driver, can be effected, substantially as described.

Second, operating the sickles Q Q, and the revolving shafts F' F'', by means of connecting shaft E with shaft M and M, with F' F'', in the manner as set forth.

No. 36,047.—W. A. WOOD, of Hoosick Falls, N. Y.—*Improvement in Harvesting Machines.*—Patent dated July 29, 1862.—Upon the inner end of the finger bar is attached one end of a link, the other end fitting upon the crank of a short shaft extending back and provided at its rear end with a bevel pinion which is operated by a lever under the control of the driver, so that by forcing back the lever, the finger bar will be elevated as desired. The tongue of the machine is pivoted to the front part of the frame, and its rear end is furnished with a catch or hook which will catch upon a guide piece attached to the rear part of the frame, and when thus caught or supported, the front part of the frame will be raised with the shoe so as to admit of the machine being moved from place to place. The axle passes through seat plates by means of which the frame is suspended to the axle.

Claim.—The combination of the link, crank and geared lever, for raising up, holding up, or lowering the finger bar, substantially as described.

Also, in combination with the foot and hinged shoe, which allows the finger bar to turn up, the pivoted tongue, catch, and guide, for giving the shoe an additional elevation above the ground for the purposes of transportation, substantially as described.

Also, suspending the main frame to the main axle by means of the seat plates, substantially as described.

No. 36,048.—W. H. ALLEN, of Fryeburg, Me., assignor to Himself and OTIS WARREN, of the same place.—*Improved Apparatus for Leaching Tan Bark, and Obtaining Extracts.*—Patent dated July 29, 1862.—This invention consists in the employment of a tub or vat provided with a perforated false bottom or strainer somewhat elevated above the real bottom. In the centre of the tub is arranged a tubular shaft C, whose upper end is open and extends into a stuffing box fixed upon the lower end of a chambered conduit elbow. Extending horizontally from the tubular shaft C is a hollow or chambered arm opening into the shaft and closed at its outer end, and provided with a series of openings along one side; the object of the apparatus being to distribute water or any other leaching liquid in fine streams, and evenly, over the upper surface of a mass of bark or other material to be leached.

Claim —An improved leaching apparatus, constructed in manner and so to operate substantially as represented and described.

No. 36,049.—E. M. BENFIELD, of Maquon, Ill., assignor to BENFIELD & DAWDY, of the same place.—*Improvement in Machines for Trimming Hedges.*—Patent dated July 29, 1862.—Within a suitable frame-work is arranged a double series of stationary and rotary cutters in a vertical plane, for trimming each side of the hedge, in connexion with which is a horizontal series of stationary and rotary cutters for trimming the top of the hedge, the two series operating together by means of gearing. In the rear of the trimmers is a frame, which is jointed to the forward frame and so arranged as to raise and depress the trimming cutters and to guide the machine.

Claim.—First, combining with the frames A A, constructed as described, the rotary side cutters *c c c c*, and stationary cutters *g g g g*, and the top or horizontal rotary cutters *k k k k*, and stationary cutters *m m m m*, the rotary cutters being operated by the driving wheels C C, through the medium of gear wheels, as herein described.

Second, raising and depressing the front ends of the frames A A by means of the inclined beam I', arm P, and spring latch V, the arm P being secured to the rear frame, which is jointed to the frames A A at *o o*, and which is mounted on guide wheels *t t*, at its rear end, substantially as herein described.

No. 36,050.—ALBERT BRIDGES, of New York, N. Y., assignor to Himself and ALFRED BRIDGES, of Newton, Mass.—*Improvement in Railroad Car Springs.*—Patent dated July 29, 1862.—This invention consists in the employment of shafts to answer as springs by a torsional action. These shafts extend across the truck, each being free to turn in four bearings or brackets, and each rigidly fixed to three arms or levers, two of which are near the opposite ends of the shaft and the third at the centre, in proper relative positions for bearing the load to be supported. The lower extremities of the central arms are connected by a bolt and nuts so arranged that the torsion of the springs may be increased or diminished as required.

Claim.—First, the employment in railroad car trucks of torsional springs, so mounted and arranged as to operate substantially in the manner herein set forth.

Second, the employment in such trucks of the adjustable torsional apparatus, consisting of the connexion H with its nut or equivalent adjusting means in combination with the brackets and levers represented or their respective equivalents as set forth.

Third, the arrangement of torsional springs M N, or their equivalents, in combination with arms G E F, or their equivalents, and with a car truck, so that the equalizing effect shall be obtained substantially as described.

No. 36,051.—JOHN EKIN, of Xenia, Ohio, assignor to Himself and WILLIAM ALLISON, of the same place.—*Improvement in Steam Boilers.*—Patent dated July 29, 1862.—This invention consists of a steam boiler and furnace having an inward flue with a downward draught, and an outer discharge flue with a draught in a reverse direction, the flue first traversed by the products of combustion being within the water space and the return flue on its exterior, so that the water is entirely surrounded by the heating gases, and the hottest gases are entirely surrounded by a heating surface in contact with the water. Within the inner flue is a grate, provided with one or more apertures of sufficient size and so located that masses of incombustible matter may escape through the said apertures after having been for some time subjected to the action of the burning fuel. A stirrer, formed of a hollow shaft terminating in a number of expanding arms, is journaled above in a cross-bar, and rests upon the bottom of the grate.

Claim.—First, an inner flue B, containing the fire space and fuel supply chamber, in the described combination, with an annular water space A, surrounded by an annular flue C, communicating with the flue B at the lower or rear end of the water chamber, all substantially as specified.

Second, a grate F, applied within the flue B, and provided with one or more apertures, adapted by their size and location to permit the escape of slag after it has been for a time subjected to the action of the burning fuel, substantially as set forth.

Third, the hollow stirrer G, operating in connexion with the grate F *f*, substantially as and for the purposes set forth.

No. 36,052.—A. C. FERREN, of Decorah, Iowa, assignor to Himself and F. M. CLARK, of the same place.—*Improvement in Screens for Separating Oats from Wheat.*—Patent dated July 29, 1862.—To the upper surface of a screen are attached a series of vertical strips or plates at such a distance apart that oats and cockle will be retained upon the screen in a lengthwise position, and prevented from assuming a vertical position, so as to pass off at the end, while the wheat will drop through the screen.

Claim.—In combination with a screen, a series of parallel vertical plates *c*, attached to the frame A of the screen, to operate as and for the purpose herein set forth.

No. 36,053.—A. M. HILL, of Bradford, Conn., assignor to C. A. MILLER, of Philadelphia, Pa.—*Improvement in Locks.*—Patent dated July 29, 1862.—This invention consists in a mechanism for reversing the latch bolt of a door lock so that the latter can be readily converted from a right-handed to a left-handed lock, and vice versa.

Claim.—The arms D and D′ constructed, adapted to each other, and arranged for the reception of the square spindle H, substantially as set forth, in combination with the sliding yoke G, its projections *i* and *i*, or their equivalents, and the latch bolt E, the latter being connected to and arranged to turn in the said yoke as specified.

No. 36,054.—C. B. LONG, of Worcester, Mass., assignor to Himself, AUGUSTUS RICE, and JONATHAN LUTHER, of the same place.—*Improvement in Device for Indicating the Elevation of Ordnance.*—Patent dated July 29, 1862.—This invention consists in the combination of an index attached to or forming a part of a pendulum whose plane of oscillation is intended to be parallel with the axis of the bore of the cannon or other piece of ordnance, and a pendulous scale or dial whose plane of oscillation is intended to be perpendicular to the bore, the said scale or dial being suspended in or upon bearings which are to be attached to the trunnions, and the pendulum carrying the index being suspended from the said dial, upon which the index will indicate the elevation of the gun under all conditions. Combined with the pendulum and pendulous dial is a locking hook, so applied as to be capable of locking the scale or dial in fixed positions relatively to the gun.

Claim.—First, the combination of the pendulum C, index pointer *c*, and swinging frame or dial B, having a scale *b*, the whole arranged to operate substantially as herein set forth.

Second, the hook E, applied in combination with the frame A, and with a slot *g* in the pendulum C, to operate substantially as and for the purpose herein specified.

No. 36,055.—H. C. MARCH, of Lawrenceville, Penn., assignor to Himself and EDMUND SISLER, of the same place.—*Improvement in Stove Grates.*—Patent dated July 29, 1862.—Underneath a grate formed of annular and radial connecting bars is a plate D, having a number of arms, each arm being provided with two projections so arranged that one of the latter shall pass through a corresponding opening between the bars in the grate. On the under side of the plate D are projections, to which is connected a rod or bar G, the front end of which passes through an oblong opening in front of the base. In the end of the bar G is an oblong opening, and on the under side of the bar is a recess into which fits the bent end of a lever, by means of which, the plate is caused to have a lateral and vertical movement independently of the grate.

Claim.—First, the grate B, having openings arranged, substantially as specified, in combination with the plate D and its projections *i*, when the said plate is so constructed and arranged that it can receive both a lateral and vertical movement independently of the grate for the purpose specified.

Second, so constructing the grate B and plate D, and so applying both to the base A of the stove, that they can be tilted in the manner and for the purpose herein set forth.

Third, the bar G, jointed to the plate D, and arranged for the reception of the detachable lever I, as and for the purpose specified.

No. 36,056.—T. J. MAYALL, of Boston, Mass., assignor to CYRUS WAKEFIELD, of South Reading, Mass.—*Improvement in Ratan Machinery.*—Patent dated July 29, 1862.—The object of this invention is to cut away the rings that project at the joints of ratans without otherwise impairing the surface, which is effected by means of a series of rollers that firmly grasp the ratan in combination with a series of rotating cutters that are kept raised from the surface until the pressure of a ring or other excrescence causes them to converge and reduce the stick to a uniform cylinder.

Claim.—First, the method of cutting away the knots of ratan by the employment, in combination with two or more pairs of rollers, to impart to the stick of ratan a rectilinear movement, as described, of a series of rotating knives operating substantially in the manner set forth.

Second, opening and closing the knives for cutting away the knots of ratan automatically or otherwise at given intervals of time by means of the herein-described arrangement of devices or any other equivalent mechanism operating in the manner substantially as set forth.

No. 36,057.—T. J. MAYALL, of Boston, Mass., assignor to CYRUS WAKEFIELD, of South Reading, Mass.—*Improvement in Ratan Machinery.*—Patent dated July 29, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—First, the method herein described of dividing and cutting the surface of ratan into longitudinal sections or strips that may be subsequently separated from the core to form strands or braids for seating chairs and for other purposes, by the employment, in combination with suitable feed rollers, of a series or cluster of cutter wheels arranged as shown and described, so as to revolve by the progress of the stick of ratan, and to cut into its surface to the depth required for the thickness of the strand, substantially as herein set forth.

Second, providing the corresponding grooves of rolls for carrying the ratan to and from the cutting mechanism with vulcanized India-rubber as described, so that the stick of ratan, while being fed and properly guided through the machine, may be firmly grasped without bruising or crushing its silicious surface, substantially as hereinbefore set forth.

No. 36,058.—T. J. MAYALL, of Boston, Mass., assignor to CYRUS WAKEFIELD, of South Reading, Mass.—*Improvement in Ratan Machinery.*—Patent dated July 29, 1862.—This invention consists in the employment of a series of peculiarly formed knives that cut into the surface of a stick of ratan to the depth required for the thickness of the strand while the stick is passed through the machine by suitable feed rollers.

Claim.—The apparatus herein described for dividing the surface of ratan into longitudinal sections previous to the said sections being separated from the core, to form strands for chair seating and other purposes, the same consisting of a cluster of lancet knives in combination with and protruding from the cam faces of self-adjusting levers, the whole being constructed and arranged, in relation to a suitable ratan-feeding mechanism, to operate substantially as herein shown and set forth.

No. 36,059.—G. W. MUIR, of Manchester, England, assignor to J. A. LOCKE, of Boston Mass.—*Improvement in Ventilators for Buildings.*—Patent dated July 29, 1862.—The nature of this invention is explained by the claim. The specification describes various modifications of the device.

Claim.—In combination with a ventilating apparatus or an air shaft divided into three or more passages, the external openings to the atmosphere and the internal openings to the apartments, so that whatever may be the direction of the external natural currents of air, some one or more openings shall be exposed to it in such a way as to receive an entering current, whilst other openings are free for the outgoing current without interference from the external current, as described.

No. 36,060.—C. N. ORPEN, of New York, N. Y., assignor to Himself and JOHN GAUDU, of the same place.—*Improvement in Placing Reservoirs for Lamps.*—Patent dated July 29, 1862.—This invention consists in providing the bottom of a reservoir for containing coal or other oil, and used as a lamp, with a socket so as to enable it to fit upon a common gas burner, the latter being provided with a sleeve of India-rubber or other suitable material, by which means a lamp may be affixed to a gas burner when the gas is not used.

Claim.—The socket *a*, applied in the reservoir *b*, to set over the gas burner *c*, as and for the purposes specified.

Also, the elastic sleeve *d*, upon the burner *c*, to receive the socket *a*, as set forth.

No. 36,061.—L. S. SCOFIELD, of Somerville, Mass., assignor to Himself and E. D. BELL, of Malden, Mass.—*Improvement in Skeleton Skirts.*—Patent dated July 29, 1862.—This invention is explained by the claim.

Claim.—The new manufacture of skeleton skirts described, in which the hoops are secured to the tapes by cords which pass through the tapes and through the coverings of the hoops, and are knotted or tied at each crossing of the tapes and hoops, each of which cords extends continuously along each tape from the top to the bottom, and serves to support the hoops in common with the tapes, as well as the purpose of securing the hoops and tapes together.

No. 36,062.—C. M. SPENCER, of South Manchester, Conn., assignor to CHARLES CHENEY, of Hartford, Conn.—*Improvement in Cartridge Retractor for Breech-Loading Fire-arms.*—Patent dated July 29, 1862.—This invention is designed to be applied to the fire-arm for which a patent was granted to the said Spencer in 1860, and numbered 27,393. In a recess at one side of the piece B, in front of the piece C, described in the aforesaid patent, is arranged a thin, flat lever secured to the piece B by means of a screw pivot, which constitutes the device for withdrawing the cartridge case, and, in connexion with a pivoted tongue, serves to withdraw and conduct the cartridge case out of the cavity of the breech frame.

Claim.—The arrangement of the hinged lever G, with the breech pieces B C, frame A and tongue *m*, in the manner herein shown and described.

No. 36,063.—WILLIAM WESTLAKE, of Milwaukie, Wis., assignor to Himself and C. L. RICE, of the same place.—*Improvement in Ventilators for Railroad Cars.*—Patent dated July 29, 1862.—Projecting downwards from the centre of the horizontal cylinder above the car is a cylinder K, having its lower end contracted for the purpose of directing the air to the centre of the water receptacle *s*, which is placed just below the ceiling of the car. This receptacle is connected to the cylinder K by means of a rod passing through a tube in its centre, and a nut. A portion of the rod is provided with a screw-thread, so that the pan may be raised or lowered to or from the ceiling. The pan is also provided with a flange to prevent the water from escaping, and with a dust cloth attached by a spring hook, so as to be readily removed.

Claim.—First, contracting the lower end *o* of the cylinder K, for concentrating and directing the current of air to the pan or dust receptacle, as set forth.

Second, the fan or receptacle *s*, provided with the flange or deflection *v*, with the spring hoop and cloth, and with the adjusting rod *t* and nut *r*, as described.

No. 36,064.—SAMUEL T. ADAMS, of Medina, Ohio.—*Improved Washing Machine.*—Patent dated August 5, 1862.—The nature of this invention is explained by the claim and engraving.

Claim.—The rubber D, provided with two series of rollers set at an angle to each other, and separated by the dividing board F, in which they have a bearing, in combination with the concave, provided with the fluted slats *a a*, which are placed at an angle to each other, and whose ends connect under the dividing board as represented, the whole being constructed and arranged substantially as and for the purpose herein specified.

No. 36,065.—W. P. BATTEY, of Utica, N. Y., and W. N. TAYLOR, of Philadelphia, Pa.—*Improvement in Gas Retorts.*—Patent dated August 5, 1862.—This retort is cast open at both ends and divided into three or more chambers by partitions extending through it lengthwise, for the purpose of causing the oil from which the gas is made to pass through the length of the retort three or more times while the gas is being generated. The ends of the retort are closed by movable heads, so that when the retort has become worn or burned on its lower side by use it can be taken out and the ends be reversed, when it will be again ready for use.

Claim.—First, a gas retort so constructed as to be capable of use in reversed position, substantially in the manner and for the purpose set forth.

Second, we claim, in combination with the gas retort A, the removable heads F, substantially in the manner and for the purpose set forth.

Third, the use of two or more chambers, in combination with a gas retort, constructed substantially in the manner and for the purpose set forth.

No. 36,066.—ROBERTS BARTHOLOW, of U. S. Army.—*Improved Solid Cartridge.*—Patent dated August 5, 1862.—This invention consists of a composition formed of photographic collodion cotton dissolved in a mixture of alcohol and sulphuric ether, which, when properly prepared, is mixed with due proportions of nealed and granulated powder.

Claim.—The use of the within-described water-proof solid cartridge, compounded and constructed substantially as herein specified.

No. 36,067.—EDWARD BEANES, of Havana, Island of Cuba.—*Improvement in the Manufacture and Refining of Sugar.*—Patent dated August 5, 1862.—The nature of this invention is explained by the claim.

Claim.—The employment of phosphate of ammonia in conjunction with sulphurous acid or any of the sulphites in the manufacture and refining of sugar, substantially as and for the purpose herein described.

No. 35,068.—EDWARD and JOHN BOURNE, of Pittsburg, Pa.—*Improvement in Radiators.*—Patent dated August 5, 1862.—This invention consists in the application of short tapering tubes or flues (open at both ends) passing transversely through the two thin metallic sheets composing the radiator, and secured therein in such a manner as, that while they form a series of stays to enable the sheets to withstand the outward pressure of the steam, they will also serve as passages for the atmosphere, as it becomes heated at the back of the radiator, to escape through to the front instead of ascending up the wall near which the radiator is placed, and thus effect a better distribution of the heated air. Passing up and down the back of the radiator, and connected therewith near each edge, are vertical pipes communicating with the space between the sheets through the openings formed at each point of intersection in the pipes, for the purpose of conducting the steam uniformly and rapidly to each part of the radiator, and also as a means of stiffening the sheets.

Claim.—First, the application and use of short conical or funnel-shaped air tubes or flues *d d d d d d* passing transversely through the steam space between the sheets forming the radiator, in the manner and for the purpose hereinbefore stated.

Second, combining with a radiator formed of thin metallic sheets a series of steam pipes *s s s s s s*, having openings, *h h h h*, fig. 3, communicating with the space between the sheets, for the purpose of conducting the steam rapidly to all parts of the radiator, and also as a means of stiffening the sheets by acting as braces thereto, as herein set forth.

No. 36,069.—T. R. BRENT, of Muscatine, Iowa.—*Improvement in Corn Planters.*—Patent dated August 5, 1862.—This invention relates to a corn planter of the class designed for planting corn in hills and in check rows, and consists in the employment of a cam wheel placed in an adjustable frame and arranged with levers and slides in such a manner that the seed will be dropped automatically by the forward movement of the machine, and the seed-dropping mechanism at the same time be under the complete control of the driver, so that it may be stopped or put in motion at any time as circumstances may require.

Claim.—The cam wheel I provided with projections *f f*, as shown, and placed in the adjustable frame H, which is connected at its front end by a hinge or joint *e* to the bar *a* of the frame A, and connected at its back end to the crank J of the shaft K, in combination with the levers M M attached to frame H, and connected at their front ends to the seed slides F F, all arranged as and for the purpose herein set forth.

No. 36,070.—E. Y. CHEVALIER, of Fort Wayne, Ind.—*Improvement in Bee Hives.*—Patent dated August 5, 1862.—In the space between the bottom board and the lower end of the front and back pieces, is fitted a drawer which is divided into three compartments, the one in the centre serving as a feed receptacle and provided with a lid to cut off communication with the hive. The upper ends of the other two compartments are covered with wire cloth, while their outer sides are formed of slats pivoted to the drawer so as to admit of their being opened more or less for the purpose of ventilation and ingress of the moth or miller.

Claim.—The drawer B provided with the feed receptacle *e* and the ventilating compartments and moth traps *d d*, the latter being provided with adjustable slats *h* and wire cloth *g g*, and all arranged relatively with the hive, to operate as and for the purpose set forth.

No. 36,071.—J. D. CHRISTIE, of Hackensack, N. J.—*Improvement in Water Elevators.*—Patent dated August 5, 1862.—This invention consists in the employment of a tubular shaft B, to one end of which is attached a ratchet D, having an annular flanch projecting at right angles from its outer surface. Within the shaft B is placed a fixed shaft having a ratchet secured to one end of it, to which is attached a collar H. Upon this collar is placed loosely a cylindrical box or drum I, into which the flanch of the ratchet D loosely fits. This drum is provided with an ear or projection, to which is pivoted a pawl having its rear end directly opposite an opening in the drum, in which is fitted a segment slide that serves as a brake. Fitted loosely also on the collar H is a circular disk to which a crank is applied; the devices being so arranged that the windlass may be easily operated, and the article raised be held or retained at any point required.

Claim.—The hollow or tubular shaft B, with the ratchet D and flanch E attached, in combination with the stationary or fixed shaft F, with ratchet G attached, and the box or drum I, with pawl J secured to it, and the slide or brake L fitted in drum I; the above parts being used with the disk M, and all arranged for joint operation as and for the purpose herein set forth.

No. 36,072.—CASTLE CHURCHILL, of New Hartford, Iowa.—*Improvement in Seeding Machines.*—Patent dated August 5, 1862.—In this machine the hopper is attached to a frame pivoted or hinged at its rear end to the main frame, and used in combination with toothed bars connected at their lower ends by chains to the said hinged frame, so that as the hopper and its frame are raised by means of a lever under the driver's control, the teeth will also be raised from the ground.

Claim.—The attaching of the hopper or hoppers to a frame K hung or placed loosely on the rod J′, in combination with the tooth bars I, connected at their lower ends by chains *d* to the frame K, and fitted at their back ends loosely on the rod J′, whereby the teeth H may be raised from the ground by raising the hopper and frame K, as described.

Also, the combination and arrangement of the hopper frame K and tooth bars I, as and for the purpose specified.

No. 36,073.—C. M. CLARK, of Cincinnati, Ohio.—*Improvement in Broadcast Sowers.*—Patent dated August 5, 1862.—This device is designed to be so constructed and of such a size as to be attached to and easily carried by the operator. The ends of the fan are nearly in contact with the inner periphery of the fan case, so that as the fan revolves it serves, in connexion with the blast of air generated, to exert considerable force in ejecting the seed and spreading it broadcast.

Claim.—Projecting the seed from the cylindrical case B in which the fan revolves by means of the fan blast, in combination with the impact of the blades of the fan, substantially as described.

No. 36,074.—C. O. CROSBY and HENRY KELLOGG, of New Haven, Conn.—*Improvement in Machine for Producing Folded Trimming.*—Patent dated August 5, 1862.—The nature of this invention will be understood from the claim; it does not admit of a brief description.

Claim.—First, the combination of delivering apparatus substantially such as described, with apparatus for folding, substantially such as is described.

Second, in combination a delivering apparatus, an assistant folder, and a folding apparatus, all substantially such as specified.

Third, in combination a folding apparatus, or a folding and an assistant folding contrivance, and a mechanism for stitching folds together, the combination being substantially such as described and operating substantially as specified.

Fourth, in combination an apparatus for making a fold, and apparatus for stitching, and apparatus for discharging, all substantially such as described and operating substantially as set forth.

Fifth, in combination a delivering apparatus, a folding apparatus, a stitching mechanism and a discharging apparatus, all substantially such as described, and this either with or without an assistant folder, substantially such as described.

Sixth, in a folding apparatus, the use of projections at right angles to the folders or their equivalents so that a moving folding edge shall nip tape, braid, &c., between itself and such projections, so as to make a sharp fold, as described.

Seventh, an assistant folder having an interrupted motion in combination with a delivering apparatus having a continuous motion, as specified.

Eighth, folding blades grasping folded material, and moving at the same time and in the same direction with discharging apparatus grasping the same material, substantially as specified.

Ninth, in combination with each other, folding blades moving each over the other to form folds which are springy, or are mounted on springs, so that they may change their relative level and press upon goods when folding them, substantially as specified.

No. 36,075.—J. E. CROWELL, of Chelsea, Mass.—*Improvement in Flax Cleaning and Dressing Machines.*—Patent dated August 5, 1862.—This machine is composed of a series of slowly moving fluted rollers and rapidly moving beaters, pairs of the former being arranged both behind and in front of pairs of the latter in one part of the machine, and one of the latter behind the rear pair of the former, and in close relation to an inclined concave plate in another part of the machine, so that the substance treated may be left in a condition to be corded and spun the same as cotton, wool, or in long staple, as may be required.

Claim.—First, the combination of the slow rollers E E′, beaters F F′, fast rollers E2 E3, and beater F2, with its concave H, the whole constructed and arranged and operated in the manner and for the purpose substantially as herein described.

Second, the bladed beaters F F′, constructed as specified, and operated in pairs, in the manner described, in combination with the draw rollers E2 E3, and beater F2, with its concave H, substantially as and for the purpose set forth.

Third, delivering the cleaned and partly dressed flax from a machine, operating substantially as described, directly upon a fixed concave H, and under a revolving bladed beater F, of the construction and arrangement described, substantially in the manner and for the purpose set forth.

No. 36,076.—J. L. CROWLEY and L. J. JOHNSON, of Marion, Iowa.—*Improvement in Sugar Evaporators.*—Patent dated August 5, 1862.—Upon the upper hot-air chamber rests a purifier within which is fitted a movable frame provided with a perforated metal plate resting upon supports within the frame, and near the bottom is a strainer capable of being readily removed and used as a skimmer. Between the two hot-air chambers is an inclined flue, and at the rear of the furnace is a cross plate having two openings, one connecting with the furnace and the other with the lower hot-air chamber. A movable chimney is made to

slide so as to be adjusted to either the hot-air chamber or the furnace. Beneath the compartments, and so as to be adjusted to the conduit of either, is a nest of strainers, of different degrees of fineness, for drawing off and straining the sirup.

Claim.—First, the movable frame E in combination with the adjustable strainer and skimmer F, the metallic skimmer G, and the frame H, operated in the manner and for the purpose herein set forth.

Second, the angular flue K in combination with the openings *l l* and the adjustable chimney M, for the purpose herein specified.

Third, the nest of strainers N, for the purpose herein set forth.

No. 36,077.—ABRAM DAVIS, of Chicago, Ill.—*For Wind Breakers for Lanterns.*—Patent dated August 5, 1862.—The nature and object of this are explained by the claim.

Claim.—First, the wind-breaker *c c c c* for the top of lanterns and lamps, made of any suitable material, by uniting the frusta of two cones, or their equivalents, which will cause currents of air to pass around the concavities and escape at the opposite side without disturbing or extinguishing the flame, as described.

Second, the wind-breaker *h h h h*, which is a band made of tin or any other suitable metal, or of glass, with a flange at its base, and set in the bottom band, below the perforations, which will turn the current of air up into the chamber above and prevent extinguishing the flame, as described and for the purpose specified.

No. 36,078.—CHRISTIAN DORFLINGER, of Brooklyn, N. Y.—*Improvement in Lamp Chimneys.*—Patent dated August 5, 1862.—This invention is explained by the claim.

Claim.—First, the blowing and moulding of glass chimneys for lamp neck, bulb, and base, oval throughout the entire length, instead of round as at present done.

Second, the blowing of such chimneys in a mould, which insures perfect uniformity of size and a greater weight of glass, in the manner and for the purposes set forth.

No. 36,079.—CHRISTIAN DORFLINGER, of Brooklyn, N. Y.—*Improvement in Lamp Tops.*—Patent dated August 5, 1862.—This invention is also explained by the claim.

Claim.—The making of the top of lamp burners oval instead of round, so as to receive and fit all oval-base lamp chimneys, in the manner and for the purpose herein set forth.

No. 36,080.—T. H. DUNHAN, of Boston, Mass.—*Improvement in Machinery for Reducing Rope to Fibre.*—Patent dated August 5, 1862.—This machine is designed for picking untarred rope and separating its fibres so that they may be again spun. The invention consists in the combination of a picker cylinder with a feed-roll provided with teeth pointing in a direction opposite to that in which the roll revolves. Immediately beneath the roll, and extending across the machine, is a metal bed, the upper face of which is curved concentrically with the roll, while its inner edge rises above a horizontal plane, touching the lower side of the roll.

Claim.—The picker cylinder B in combination with the toothed feed-roll F, and curved bed G, operating substantially as described, for the purpose specified.

No. 36,081.—J. G. ERNST, of York, Pa.—*Improvement in Removable Bayonet Guard.*—Patent dated August 5, 1862.—This device is composed of a soft elastic ball fastened to a socket of some hard, impenetrable material, provided with a slotted flange on the outside to receive the ends of a strap, and with ears on the inside which serve to secure the ball to the socket. By means of a spring strap, in combination with an adjustable safety strap, the said guard, when applied to the point of the bayonet, is firmly retained and prevented from being displaced when the bayonet is used for practice or exercise, and easily removed when necessary.

Claim.—First, the employment or use of removable guard B for bayonets, substantially in the manner and for the purpose shown and described.

Second, the arrangement of the adjustable elastic strap or cord C D, and safety strap E, in combination with the guard B, substantially as and for the purpose specified.

Third, the arrangement of the metallic socket *b* and slotted flange *c* in combination with the elastic ball *a*, strap C D, and bayonet A, all constructed and applied substantially as and for the purpose set forth.

No. 36,082.—ROBERT FITTS, Jr., of Fitchburg, Mass.—*Improvement in Machinery for Bending Wood.*—Patent dated August 5, 1862.—This invention consists in the employment of a chain, the links of which are of V-form, and constructed in two parts, as shown in the engraving, and used in connexion with rollers, placed one above the other, whose peripheries correspond with the links of the chain, and a pattern or former made of cast-iron, in the shape of the wood to be bent, and provided with teeth. The pattern is placed between the two rollers, the teeth of the pattern meshing into the teeth of the lower roller, and the wood to be bent, after being properly steamed, is inserted between the pattern and the chain, which latter is under the upper roller. Motion is imparted through the lower roller which feeds along the wood and chain.

Claim.—First, the pattern or former G, in connexion with the chain H and pressure rollers

Claim.—First, the pattern or former G, in connexion with the chain H and pressure rollers F F′, constructed and arranged for joint operation substantially as and for the purpose herein set forth.

Second, the particular manner of constructing the chain as herein shown and described, to wit: by means of links formed of a cap *g* and lining *h*, riveted together, and connected by shackles *l* and sliding bars *a**.

Third, the combination of the cam D, pressure rollers F F′, pattern and former G, and chain H, arranged to operate as and for the purpose specified.

No. 36,083.—PHILIP GRIFFITH, of Philadelphia, Pa.—*Improvement in Grate Bars.*—Patent dated August 5, 1862.—This invention consists of a series of bars, each bar having a dovetailed recess for the reception of a dovetailed projection on the adjacent bar, in combination with a block or key at the rear end of the bars, so arranged that the bars may always retain their proper form and position laterally, and so that one or more bars may be readily removed or replaced without disturbing the adjacent bars.

Claim.—A series of bars A, each bar having a dovetailed recess for the reception of a dovetailed projection on the adjacent bar, in combination with the block or key E, the whole being arranged substantially as set forth, for the purpose specified.

No. 36,084.—W. S. HALL, of Milton, Mass.—*Improvement in Sewing Machines.*—Patent dated August 5, 1862.—This invention consists in the arrangement of the shuttle-box and feeder-guide so as to dispense with the friction caused by the race and slide. Also, in constructing the feeder-guide in such a manner as to produce uniform motion with the least possible friction. Attached to the shuttle-box, and moving with it, is the reciprocating guide of the feeder. The guide consists of a reciprocating bar N provided with a straight slot in which works a pin P connected with the feeder. When the shuttle moves forward to make a stitch, the feeder is drawn back towards the needle: after the needle leaves the cloth, the shuttle passes back, the feeder is pressed forward, the teeth acting upon the cloth and taking the cloth with it. The length of the stitch is governed by means of a slot on the end of the bar N, through which passes a set screw, upon which the bar may be shifted and by which it is secured in position.

Claim.—First, attaching the shuttle-box K and feeder-guide L to the vibrating arm G, and this, whether applied to a shuttle moving in the arc of a circle or to a reciprocating shuttle, substantially as described.

Second, the adjustable reciprocating bar N, in which is the slot *o*, wherein works the pin P as a guide for and regulator of the feeder M, as described.

No. 36,085.—W. H. HARFIELD, of London, England.—*Improved Apparatus for Working and Stoppering Chain Cables.*—Patented in England December 15, 1859.—Patent dated August 5, 1862.—This invention consists in an arrangement of devices which admit of the use, in connexion with a windlass, of the chain carrier or "flanged annular recess," which was patented to Thomas Brown, in Great Britain, April 20, 1847, and in the United States July 25, 1854, and also in such an arrangement of the respective parts of the chain-carrying windlass that it can be used in connexion with the "underlifting stopper" described in the aforesaid patent.

Claim.—First, placing the Thomas Brown chain carrier C upon a windlass shaft, and then combining therewith and with either one of the windlass supporters E a curved clearing and conveying trough J in such a manner that the chain to be operated upon can be taken from the hawse hole directly to and beneath the said chain carrier, and then be carried over the same to and into the aforesaid clearing and conveying trough, substantially in the manner and for the purpose herein set forth.

Second, when the Thomas Brown chain carriers are placed upon a windlass shaft, arranging them with ratchet wheels and with a system of operating pawls and levers, substantially in the manner and for the purpose herein set forth.

Third, giving such a form and proportion to the Thomas Brown chain carrier as shall enable a strap and lever-brake to be combined therewith, substantially as herein represented and described.

Fourth, mounting a Thomas Brown chain carrier upon a windlass shaft, when the said chain carrier is used in conjunction with the clearing and conveying trough J and the Thomas Brown underlifting stopper, substantially in the manner herein set forth.

Fifth, when the Thomas Brown chain carriers are arranged with ratchet wheels upon a windlass shaft, the employment, in connexion therewith, of the within-described arrangement of catches, which enables either of said chain carriers to be coupled with or uncoupled from the windlass shaft, substantially as herein set forth.

No. 36,086.—W. H. HARFIELD, of London, England.—*Improved Apparatus for Working and Stoppering Chain Cables.*—Patented in England May 31, 1860.—Patent dated August 5, 1862.—In this apparatus is used a windlass, which is supplied with two or more annularly recessed and radially flanged chain carriers, constructed similarly to that patented to Thomas Brown, in England, April 20, 1847, and in the United States July 25 1854

Claim.—Communicating motion from a capstan shaft to a windlass shaft, through the medium of two Thomas Brown chain carriers C′ and T, that are respectively mounted upon the said shafts and the endless chain which connects the said chain carriers with each other, all substantially as herein set forth.

When motion is communicated from a capstan shaft, in the within described manner, the arranging of the other parts of the improved chain-carrying apparatus in such a manner that one of the chain carriers C can be coupled with or uncoupled from the ratchet wheel D at the same time that the other chain carrier C can be coupled with or uncoupled from the chain carrier C′, all substantially as herein set forth.

When motion is communicated from a capstan shaft to a windlass shaft, in the within described manner, and when the chain carriers C C are so arranged that they can be coupled with or uncoupled from the windlass shaft at pleasure, the combining of the strap and lever-brakes *e f* with the said chain carriers, substantially in the manner and for the purpose herein set forth.

When motion is communicated from a capstan shaft to a windlass shaft, in the within described manner, combining the curved and pointed clearing and conveying troughs J with the chain carriers C C and the windlass supporters E, substantially in the manner herein set forth.

When motion is communicated from the capstan shaft to the windlass shaft, in the within described manner, arranging the ratchet wheel D and the counterpoise pawls *c c* in such a manner with relation to the other parts of the apparatus, that a reverse movement of the windlass will be unerringly prevented by means of the constant action of two or more of the said pawls upon the teeth on the under side of the said ratchet wheel, substantially as herein set forth.

No. 36,087.—W. H. HARFIELD, of London, England.—*Improved Construction of Chain Windlasses and Capstans.*—Patented in England July 23, 1859.—Patent dated August 5, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—Securing the radial flanges or stops *c c* to the sides of the annular recess in the improved chain-cable working capstan or windlass in such a manner that the said flanges can be withdrawn from their positions within the said annular recess, or be secured in any desired position within the same, for the purpose of adapting the capstan or windlass to the handling of cables of widely varying sizes, substantially as herein set forth.

No. 36,088.—J. H. HARPER, of Washington, D. C.—*Improvement in Bee Hives.*—Patent dated August 5, 1862.—This invention consists in constructing the alternate comb frames with their upper cross-pieces of unequal depth, for the purpose of preventing irregularity in the building of the comb. The lower ends of the frame are formed with notches fitted over pins in the sides of the hive, while the upper ends of the frame are suspended by pins within notches formed in a cleat attached within the front of the hive, and in the upper cross-piece of the sash, so as to prevent accidental lateral displacement, and admit of the ready removal of the frames.

Claim.—First, the combination of the alternate comb frame C and C′, with their upper cross-pieces *d e* of unequal depth, substantially as and for the object specified.

Second, the combination of the comb frames C or C′, with the cleat *c*, cross-piece *g*′, notches *a′ b′*, and pins *a b*, all constructed and arranged as herein shown and described and for the purposes explained.

Third, in the described combination with movable comb frames C or C′, supported as described, securing the movable honey board in position by means of pins *h* projecting into holes in the front board and door A′, as set forth.

No. 36,089.—SAMUEL HARRISON, of Pottsville, Pa.—*Improvement in Pumping Engines.*—Patent dated August 5, 1862.—This invention is intended as an improvement upon what is known as the "Cornish bull engine," and is designed for draining mines, and to be applied to those places where the veins are penetrated from the surface or outcrops on their natural inclinations, commonly called slopes, in contradistinction to shafts or vertical openings. The invention does not admit of a brief description.

Claim.—First, in combination with the triangular sides A of the frame and the inclined cylinder, the arrangement of the steam and exhaust valves with their several operative parts, as herein described.

Also, the arrangement of the cross-head K, arm Y, and the plug rod V, with its projecting bar and roller, for operating the levers W X, substantially as described and for the purpose set forth.

Also, in combination with the regulating pumps *c b*, the plungers, rods, arms, latches, and catches for regulating the strokes of the engines in either ascending or descending, or both, substantially as described.

Also, in combination with a balance beam as herein represented, the connecting of the cross-head that carries the piston and the pump rod to said beam by means of the rod I, arranged as herein described and represented.

Also, in combination with a single-acting pumping engine, the making of the head of the cylinder that is opposite to that one which receives the steam hollow, and connecting it directly with the boiler as contradistinguished from the jacket, by means of a steam pipe D', for the purpose of making the temperature of both ends uniform, as herein described and represented.

No. 36,090.—C. T. HARVEY, of Chicago, Ill.—*Improvement in Charcoal Kilns.*—Patent dated August 5, 1862.—This kiln consists of an outer metallic shell or covering, divided into segments or parts composed of one or more sheets of metal fastened together by bolts or otherwise. On the inside of this covering is a thin wall of brick or stone having a space left between it and the metallic covering, which space is filled with cement or grout formed of fire-clay or other fluid-hardening mortar.

Claim.—An improved or portable kiln, as made of a metallic covering arranged in convenient segments or sections for construction, or removable, substantially as described.

Also, in combination with the metal covering, constructed as above described, the use of an interior wall or walls C and B, substantially as and for the purpose described.

No. 36,091.—J. H. HAVENS, of Lewiston, N. Y.—*Improved Cradle Chair.*—Patent dated August 5, 1862.—The nature and object of this invention will be understood by reference to the claim and engraving.

Claim.—The combining of a crib or cradle and sewing chair with an easy arm-chair, to be used in either form separately, and then to be consolidated into one chair by one move at each change. The whole so constructed and arranged as and for the purposes set forth in the above specification.

No. 35,092.—ROBERT HENEAGE, of Buffalo, N. Y.—*Improvement in Tobacco Smoking Pipes.*—Patent dated August 5, 1862.—The bowl of the pipe has an upward and forward projection from the front of its lower part, through which is a draught hole. From the rear of the upper end projects a neck into which the stem is inserted. The upper part of the pipe is tightly closed by a cover. Beneath the neck at the rear is a chamber communicating with the air passage and provided with a plug at its lower end. The tobacco is lighted at the lower part, so that oil formed by the heat is consumed as it falls upon the lighted tobacco.

Claim.—In tobacco pipes, placing the opening, at which the tobacco is ignited, at or near the bottom of the bowl, and closing the top of the bowl with a tight cover, the whole constructed substantially as described.

No. 36,093.—A. B. HENDYX, of Seymour, Conn., and FRANKLIN FARRELL, of Ansonia, Conn.—*Improvement in Machines for Turning Irregular Forms.*—Patent dated August 5, 1862.—This machine is designed more especially for turning the necks of bayonets, and the invention consists in the employment of a rotary adjustable cutter, a sliding pattern, and a movable stock or bed piece, arranged in such a manner that articles having curved surfaces in their longitudinal profile, or straight and curved surfaces combined, may be expeditiously and perfectly turned.

Claim.—The rotary cutter H, attached to the bar or lever E, secured in the hollow shaft C of the driving pulleys D, in combination with the sliding pattern L and sliding and rotating stock V, arranged substantially as and for the purpose herein set forth.

Also, the particular arrangement of the slide N, plate O, with the stock V attached, and shaft P, together with the collar R, wormed wheel S, and nut T on the shaft P, and the sleeve Q attached to slide N, with the stop s on the bed A, for the purpose of admitting or producing the two movements of the support U, as set forth.

No. 36,094.—E. M. JUDD, of New Britain, Conn.—*Improved Cork Tightener for Curtain Fixtures.*—Patent dated August 5, 1862.—This invention consists in the employment of a blocking piece that binds within a slotted box against the window casing, and retains the cord with the necessary tension, the blocking piece being so formed that it can be relieved and the cord slacked up when necessary.

Claim.—The blocking piece *d*, wings *e e*, and roller or knob *f*, formed substantially as specified, when combined with the hollow or box-shaped slide *b*, as set forth.

No. 36,095.—G. A. KEENE, of Newburyport, Mass.—*Improvement in Funnel Measures.*—Patent dated August 5, 1862.—This invention is explained by the claim and engraving.

Claim.—A fluid measure with an opening and closing vent upon its side or bottom, and combining with said measure a tunnel rendered water-tight by means of the packing *d*, substantially as described and for the object specified.

No. 36,096.—G. H. KITCHEN, of New York, N. Y.—*Improved Portable Apparatus for Manufacturing Illuminating Gas.*—Patent dated August 5, 1862.—This apparatus consists of a furnace formed of a double casing of sheet metal, leaving a space for the reception of ashes, plaster, or other non-conducting material, for the purpose of retaining the heat in the furnace. Under the retort, which is placed in the centre of the furnace, is a tile of fire-brick

or other proper material, made thick in the middle and thinner at each end, so as to equalize the action of the fire upon the same and prevent the retort from burning.

Claim.—First, the tile *f*, formed thicker in the middle than at the ends and applied in the manner specified to equalize the heat upon the retort, as set forth.

Second, in combination with the said tile *f* a double casing *a*, to aid in retaining heat and equalizing the action thereof on the retort, as specified.

No. 36,097.—HENRY LOEWENBERG, of Boston, Mass.—*Improved Fabric for Hats and Bonnets.*—Patent dated August 5, 1862.—This invention consists in the use of cloth and cement, upon each side of which is placed a layer of paper. Upon the surface of one or both of these layers of paper is spread a layer of solution of starch, upon which, when dry, is spread one or more layers of copal or other varnish. After the varnish has become set the whole is to be embossed in imitation of braided straw.

Claim.—The above-described new or improved manufacture of hat or bonnet fabric, as made of the materials and in the manner substantially as hereinbefore explained.

No. 36,098.—C. B. LOVELESS, of Syracuse, N. Y.—*Improvement in Grates.*—Patent dated August 5, 1862.—This grate is provided with a cast-iron hollow fire-back, communicating by means of pipes with a cast-iron chamber over the grate. Below the grate is also a chamber in the wall connected with the fire-back, in which are pipes leading to registers placed near the floor at each side of the grate for the admission of cold air, which, in its passage through the fire-back, becomes heated and passes out at the register opening above the grate.

Claim.—The cold-air registers *a a*, chamber D, vertical pipes C, chamber E, and hot-air register *c*, in combination with the open fire-grate B, when constructed substantially as described.

No. 36,099.—W. H. MALLORY, of New York, N. Y.—*Improved Fan-shaped Sail.*—Patent dated August 5, 1862.—This invention consists in a method of constructing the truss for attaching a fan-sail to the mast, and also in a novel combination of the yard, truss, and swinging arms for spreading the sail. The outer ends of the arms are provided with eyes for the reception of lines or chains, through which the furling, reefing, and spreading the sail is effected.

Claim.—First, the truss C, composed of the collars *a a'*, socket *b*, arches *c c*, and plates *d d*, substantially as herein set forth.

Second, the combination of the yard B, truss C, and swinging arms D D, lines or chains E F E F, and divided sail G G, to operate substantially as and for the purpose herein specified.

No. 36,100.—G. A. MECHAM, of New York, N. Y.—*Improvement in Suspender Fastenings.*—Patent dated August 5, 1862.—This device is formed of a strip of elastic metal bent double, to each end of which is pivoted a button or washer so as to allow the button to turn on the metal strip. The sides of this strip are serrated or notched, so as to hold thereon an oblong band which is capable of being turned, so as to confine the buttons at a greater or less distance apart to suit various thicknesses of cloth.

Claim.—First, the employment in clasps of the buttons B, or their equivalents, so arranged as to allow the supporting part A to rotate or turn relatively thereto, substantially as and for the purpose herein described.

Second, the oblong band C in combination with the clasp A, substantially as and for the purpose herein set forth.

No. 36,101.—C. C. MOORE, of New York, N. Y.—*Improvement in Application of Wind Power to Produce a Reciprocating Movement.*—Patent dated August 5, 1862.—The object of this invention is to transmit in a simple manner the power from a wind-wheel shaft to the machinery to be driven, and by such means as will not interfere with the proper traversing of the cap, in which the bearings of the wheel shaft are placed, and at the same time admit of the journal of the wheel shaft having an equal pressure upon each of its bearings by having a pitman at each side of the cap, so as to insure an easy working of the moving parts with a comparatively small degree of friction.

Claim.—The combination and arrangement with a wind wheel F of the double crank shaft G, cap C, shaft A, pitman *e e*, slide H, and band I with rods *i i*, attached as and for the purpose herein set forth.

No. 36,102.—O. F. MORRILL, of Chelsea, Mass.—*Improved Apparatus for Gasifying and Burning Carbon Oils.*—Patent dated August 5, 1862.—The receiving mouth of the vapor conduit is arranged above the lower part of the inner surface of the arm or vapor generator, in order to prevent the fluid in a liquid state from being driven from the generator into the conduit. This conduit is extended forward into the vaporizer and over the perforated diaphragm, so as to cause the tension of the vapor to be brought to a state favorable for its discharge into and through the mixer or burner, as well as to facilitate the heating of the liquid and vapor. The screw cap, with its central projection and annular recess, serves to retain the washer in place within the screw cap during, as well as after, the removal of the latter from its place.

Claim.—The arrangement of the receiving mouths of the conduit D, above the lower part of the interior of the vaporizer, as described.

Also, the extension of the conduit D, as set forth, into the vaporizer B, and across and over the burner or part E, thereof, substantially as and for the purpose set forth.

Also, the screw cap G, as constructed with the central core or projection *d*, and the annular recess *e* arranged within it, and to receive the washer when placed within the screw of the cap, as set forth.

No. 36,103.—DON J. MOZART, of New York, N. Y.—*Improvement in Clock and Watch Movement.*—Patent dated August 5, 1862.—The inventor says: The object aimed at in this invention is to produce a clock or watch that will run a whole year at each winding up, without increasing the size, weight, complication, or cost of the same. Reference to the specification and drawings will be necessary for a description of the invention.

Claim.—The construction and arrangement of the mainspring A with two springs or coils, each furnishing the only fixed attachment for the other, in combination with two driving wheels B B acting on opposite sides of a common pinion *b*, substantially as and for the purpose herein specified.

In combination with the above I also claim the combined arrangement of the successive wheels and pinions B *b*, C *c*, and D *d*, so that the respective pairs shall directly produce the main divisions of time, in connexion with suitable dial plates, substantially as and for the purpose herein set forth.

In combination with the subject-matter of the first clause of the claim, I also claim the construction and arrangement of the escapement, substantially as and for the purpose herein specified.

No. 36,104.—WILLIAM OSMOND, of New York, N. Y.—*Improvement in Sand Screens.*—Patent dated August 5, 1862.—The object of this invention is to insure a proper tension of the wires between the cross rods, and prevent injury from the action of a spade upon its surface. The claim explains the nature of the invention.

Claim.—A sand screen having its wires *d'* secured to its cross rods *c* by twisting the former around the latter, and either with or without the rings or collars *f* interposed between the wires, substantially as described.

No. 36,105.—G. B. OWEN, of New York, N. Y.—*Improvement in Clock Cases.*—Patent dated August 5, 1862.—This invention consists in forming the case of the clock of a single piece of metal so spun or otherwise formed that it may receive the dial, and the latter be made to serve as a brace or strengthening partition for the case. The material of the case near its front end is so swaged or spun as to form an external recess or rebate around the case for the sash to fit into, and its extremity is bent over inwards towards the axis of the case and backward, so as to form a bevelled flange, which serves as a bearing for the dial.

Claim.—First, a clock case constructed of a single piece of sheet metal, and having its extremity turned over and inward at the front end, when said case thus formed is used in connexion with the dial C placed within the case, as and for the purpose set forth.

Second, the flange D, spun or struck up at the back part of the case A, in combination with the recess *a* and flanch *b* at the front end of the case, all formed of a single piece of metal, as and for the purpose specified.

Third, connecting the sash B directly to the case A by means of the hinge F, formed of a metal strap *e* passing around a wire *f* attached to the sash and through a slot *g* in the case, to the inner side of which it is secured; but this I only claim when the hinge is used with a case A constructed as herein described.

No. 36,106.—J. M PERKINS, of Cleveland, Ohio.—*Improvement in Locks.*—Patent dated August 5, 1862.—This invention consists in so constructing the lock that it cannot be unlocked from the outside even with a key, or picked by any instrument, when locked upon the inside—the lock having two keyholes, that upon the outside being completely closed by a guard in the act of locking it upon the inside.

Claim.—Placing the keyholes on opposite sides of the lock, at unequal distances from the bolt, in combination with the bolt and guard, constructed and arranged substantially as and for the purpose set forth.

No. 36,107.—ENOCH PIPER, of Camden, Maine.—*Improvement in Preserving Animal and Vegetable Substances.*—Patent dated August 5, 1862.—This invention consists in the employment of a chamber the walls of which are double, and filled with charcoal or other non-conducting substance. Through this chamber pass tubes made larger at the top than at the bottom, which contain the freezing mixture described in the patent granted to the said Piper on March 19, 1861, and connecting at their lower ends with a tube extending across the bottom of the chamber. The upper ends of these tubes are connected to removable troughs or pans, supported upon the sides and provided with double covers filled with some non-conducting substance. At one end of each of the tubes are attached two pipes extending through the side of the case, one connecting with the extreme lower part of the tube, and the other at or near the top thereof, for the purpose of draining and cleaning the tube.

Claim.—First, the employment in refrigeratory apparatus of the removable receiving and distributing pan D, in combination with the series of descending tubes B, and suitable means of continuously draining the same, substantially as and for the purpose herein described.

Second, the tapering form of the descending tubes B, arranged to operate in combination with a receiving and distributing pan D and a cooling chamber M, substantially as and for the purpose specified.

Third, in refrigeratory apparatus, the arrangement of the open ascending drain tube F relatively to the tubes C and B, in the manner and for the purpose herein set forth.

No. 36,108.—W. R. POMEROY, of Millersburg, Ohio.—*Improved Mode of Constructing Cartridges.*—Patent dated August 5, 1862.—In this invention the ordinary cartridge is used, the upper end being cut off immediately over the powder. An outside wrapper of paper is then placed over the cartridge and secured to the same by twisting the end, so that it may be readily drawn off when the cartridge is to be used.

Claim.—The arrangement of the cartridge in such a manner as to obviate the necessity of biting, as heretofore, using for that purpose the wrapper C, arranged in the manner and for the purposes described.

No. 36,109.—J. C. RAYMOND, of Brooklyn, N. Y.—*Improved Rudder.*—Patent dated August 5, 1862.—This invention consists in constructing the blade of a spare rudder to be carried on board the vessel, or the proper rudder of the vessel, in two separate parts, one of which is capable of being drawn into the other in such a manner as to permit the blade to be lowered or raised through the port provided in the deck and stern of the vessel for its stem and head to work in, without making the said port of larger size than is necessary for the head and stem, the separate parts of the blade being connected by pins and oblique slots, and that part which is drawn into the other being operated by a rod passing through the stem and head.

Claim.—The construction of the rudder blade of two parts B C, one of which is capable of being drawn into the other in such a manner as to allow the blade to pass through an ordinary rudder port, substantially as and for the purpose herein specified.

Also, combining the inner portion C of the blade with the outer portion B, and with the stem and head by means of oblique slots *g g*, pins *b b*, and a rod D, passing upward through the stem and head, substantially as herein specified.

No. 36,110.—C. M. ROULLIER, of Paris, France.—*Improvement in Driving Bands for Machinery.*—Patent dated August 5, 1862.—This invention is explained by the claim.

Claim.—As a new manufacture, the production of articulated cables, bands or belts, for driving machinery or for other purposes, by utilizing waste cuttings of leather and forming such cuttings into links, which being mounted upon spindles, whether combined or not with metallic links, constitute a cable or band capable of adjustment in length and width without seam or ridge, substantially as herein set forth.

No. 36,111.—WILLIAM SELLERS, of Philadelphia, Pa.—*Improvement in Tool Holders for Turning Lathes.*—Patent dated August 5, 1862.—This invention consists in arranging a hinge-like attachment of the tool holder to the cross slide of the slide rest of a turning lathe; the axis of this hinge being placed under, or nearly under, the centre of the tool-post or hold-down for the tool, and so constructed as to be capable of having any lost motion from wear or imperfection of workmanship taken up. The cutting point of the tool projects beyond the axis of this hinge, so that the action of the cutting tends to depress the cutting point, and to elevate the tail end of the hinge, a spring under the tail end acting in the same direction, thus insuring a constant tendency to move upward against a thumb nut on a screw passing through the tail and preventing it from rising.

Claim.—The construction of a slide rest for lathes wherein the cutting tool, in addition to the usual movements in a horizontal plane, has also a vertical adjustment, when this adjustment is made about a fixed centre placed between the cutting point and the adjusting screw, substantially as described and for the purpose specified.

Also, the described method of forming a hinged joint for the purpose of giving vertical adjustment to the turning tool, by the employment of a block H and pin G, when constructed and arranged in connexion with the other parts of the rest, substantially as and for the purpose described.

No. 36,112.—WILLIAM SELLERS, of Philadelphia, Pa.—*Improvement in Boring Mills for Metals.*—Patent dated August 5, 1862.—In this machine all the framework above the table for carrying the boring tube is dispensed with, and the interior of the bed is provided with a strong, vertical slide working in suitable bearings cast in the bed. This slide receives the cutter bar upon its top and is provided with a rack, by means of which the vertical movement required for the action of the boring is given. The rotating motion is given to the table by means of a bevel pinion on a horizontal shaft gearing with teeth in the under side of the table. The table is provided on its under side with an annular projection, which is fitted into a deep circular corresponding channel in the top of the bed, by which means the table is provided with a good bearing, and is also accurately guided between the sides of the said channel.

Claim.—First, the described construction of a boring mill for metal, in which the boring bar is actuated and held in position laterally by a vertical slide placed beneath the table or face plate of the machine, the whole being constructed and operating substantially in the manner and for the purpose specified.

Second, the employment, in combination with the table B, of a ring P, or its equivalent, when arranged and operating substantially in the manner and for the purpose set forth.

No. 36,113.—WILLIAM SELLERS, of Philadelphia, Pa.—*Improvement in Metal Planing Machines.*—Patent dated August 5, 1862.—This invention consists in providing the table with a rack operated by a peculiar form of spiral gearing, which enables the driving shaft to cross the bed diagonally, passing out in a position near enough to the upright to enable the driving belts to be within reach of the operator.

Claim.—The use of cogged gearing for planing machines, wherein one or the series of cogs have their contact surfaces formed by straight lines in the direction of their width, whilst the other series have their contact surfaces arranged spirally about an axis which is placed at an angle to the line of motion of the first series.

No. 36,114.—EDWARD SPENCER, of St. Louis, Mo.—*Improvement in Hand Stamps.*—Patent dated August 5, 1862.—This device is formed of two parts hinged together at one end as shown in the engraving, the lower part being thicker than the upper, so as to receive a die having upon each side a roller, upon which is wound a ribbon, passing over the die, and saturated with printers' ink.

Claim.—The combination of the die B, the rollers C, and ribbon *h*, with a pair of squeezers, made substantially in the manner shown and described.

No. 36,115.—ENOCH STEWART, of Battle Creek, Mich.—*Improvement in Current Water Wheels.*—Patent dated August 5, 1862.—Upon a horizontal shaft is placed a wheel provided with buckets, which are attached by joints or hinges in such a manner that the buckets will, by their own gravity, adjust themselves in proper working position previous to entering the water, and as they leave the water assume a closed position. Pins are secured to the rims of the wheel to prevent the buckets from swinging outward beyond a right angular position.

Claim.—A current wheel B, placed on a horizontal shaft A, and provided with buckets *d*, attached to its rims *a a* in a radial position by means of hinges or joints *e*, and used in connexion with the pins or stops *h*, all arranged to operate substantially as set forth.

No. 36,116.—B. F. STURTEVANT, of Boston, Mass.—*Improvement in Projectiles for Rifled Ordnance.*—Patent dated August 5, 1862.—In affixing the packing to the body of the projectile, the latter is first cast with an annular groove extending within and around its rear portion and opening out of the same by means of a passage narrower than the groove. This groove and its neck are so arranged with the body of the projectile as to form an annular shoulder for supporting the front edge of the metallic packing which fills the neck and groove. The said shoulder is formed with a series of cavities or teeth so that, in the process of casting, the packing portions may run between the teeth, and thus interlock and prevent the packing from being turned laterally in the annular groove; the object being to prevent the rupture of the packing and its detachment from the body of the projectile, either at the period of discharge of the latter from a piece of ordnance or during its flight therefrom.

Claim.—In combination with the annular neck groove *b*, and the part of the expansive packing to enter the same, the annular enlargement or crossing groove *a*, and the metallic head or filling thereof.

Also, the arrangement of the two series of interlocking teeth with respect to the annular packing and its holding grooves.

No. 36,117.—ALONZO TEMPLETON, of Chicago, Ill.—*Improved Shallow Water Boat.*—Patent dated August 5, 1862.—This invention consists in the employment of an endless jointed track with an endless band provided with floats, in combination with the track and propelling wheels of a boat, whereby the latter is adapted for use on land as well as upon water, the same being designed more especially for the navigation of shallow waters, or such as are obstructed by sand-bars. The rudder consists of two parts, provided at their lower ends with wings, which are set at an angle with their posts and with each other. The posts are fitted to have a vertical movement in a transverse beam at the rear end of the flexible bottom, so that the rudder can be elevated from the water when necessary.

Claim.—First, the endless flexible band H, having the form of a shallow boat bottom and armed with floats *d*, in combination with the endless jointed track F, propelling wheels D D′, and trucks or supporting wheels C C, when the whole is constructed and arranged in the manner and for the purposes described, and in combination with the preceding, and the like land and marine boat, the compound rudder, hereinbefore described, consisting of posts *e e′*, wings *f f′*, and rocking lever K, when combined and arranged to operate in the manner and for the purpose specified.

No. 36,118.—C. J. E. THOMPSON, of Providence, R. I.—*Improvement in Adjustable Links.*—Patent dated August 5, 1862.—This link is formed of two parts of the form shown in the engraving, each part being provided at one side with a semi-cylindrical lug or projection and at the opposite side with an opening to receive the lug of its fellow part when the posts are fitted together; the object being to obtain a link which may be immediately applied to a chain as a substitute for a broken link or to connect any detached parts.

Claim.—Having the link made in two equal parts A, the faces of which are provided with openings *b* and projections *a*, which fit and operate together in the manner herein shown and described.

No. 36,119.—ADAM WEBER, of New York, N. Y.—*Improvement in Setting Gas Retorts.*—Patent dated August 5, 1862.—This invention consists in the arrangement of suitable girders supported by cross-ties resting upon an arch or arches built over the fireplace in such a manner that each retort shall be supported by itself without resting or bearing upon any other retort, whereby those made of clay will be less liable to break, and each retort may be taken out and replaced without disturbing any of the others.

Claim.—The herein-described arrangement of setting clay retorts upon separate girders, said girders being supported by an arch or arches built over the fireplace, and arranged in the manner and for the purpose substantially as set forth.

No. 36,120.—W. H. WHITE, of Dubuque, Iowa.—*Improvement in Cutters for Sugar Cane, &c.*—Patent dated August 5, 1862.—This device is composed of one circular and two semicircular knives attached to a frame, a socket ferrule which receives the handle and shank of the frame, the same being held together by a key, and the whole so arranged as to readily trim the whole cane and cut off their tops at one operation.

Claim.—First, the combination of the two semicircular knives and the sickle-shaped knife, as seen at figure 2 and 3, and placed in the frame B B, or any two circular knives, whether made into one or more pieces of steel and held together by springs.

Second, the semicircular knives, as shown in figures 1 and 2 and letters *a* E P, and the encircling of the cane with sharp edges, for the use and purposes herein described.

Third, the mode of fastening the shank S H into the socket ferrule, as seen in figure 4 and letters G and S and the dotted lines.

Fourth, the combination of the frame as seen at figures 3 and 6, and operated as above specified and for the purposes set forth.

No. 36,121.—BERNARD WISE, of Cincinnati, Ohio.—*Improvement in Housing and Shipping Ice.*—Patent dated August 5, 1862.—This invention consists in the employment of two endless belts or carriers supported upon causeways which are hinged at one end to a frame so as to render them adjustable as to inclination, and used in connexion with two or more rollers placed upon a level with the upper ends of the endless carriers. The lower ends of the causeways are provided with a chute attached by hooks to a rod so as to render them adjustable in height and inclination as circumstances may require.

Claim.—First, the arrangement of inclined and adjustable causeways C C′, endless carriers E F G, and rollers H, the whole being combined and operating together substantially as set forth.

Second, in the described connexion with the adjustable causeway C, the hinged and self-adjusting discharging chute J K, operating as set forth.

No. 36,122.—LORENZ WOLF, of St. Louis, Mo.—*Improvement in Ploughs.*—Patent dated August 5, 1862.—This invention consists in the employment of an iron box attached to the under side of the plough-beam in the rear of the standard, in which box is arranged a plate *c* provided with a threaded lug or projection at its rear end through which works a set screw, the screw being secured transversely to the sides of the iron box. The forward end of the plate *c* is attached to the rear end of a strap extending under the plough-beam to its front end, where it forms the clevis. Upon moving the plate *c*, by the screw, to one side or the other, the direction of the ploughshare is correspondingly changed. A recess is made in the edge of the ploughshare and land side to receive the sod-cutter, which, when not in use, can be removed, and a block of iron of proper size be fitted to the recess.

Claim.—First, the iron box F placed under the beam with the arrangement of the plate C, the lug *e*, and the screw G, working in the box in connexion with the standard D, the plough-beam and ploughshare or its equivalent, substantially in the manner described and for the purpose specified.

Second, providing the front end of the land side of the plough with a recess for the reception of the detachable sod-cutter J, and also providing attachable block J′, to fill said recess when the sod-cutter is detached, the whole to be constructed and arranged as and for the purpose set forth.

No. 36,123.—JAMES FENNING, of Danbury, Conn., assignor to Himself and James S. TAYLOR, of the same place.—*Improved Coasting Guard for Boots and Shoes.*—Patent dated August 5, 1862.—This invention consists in the use of a metallic tip fitted to the toe or heel of a boot or shoe, and secured to the foot by means of a strap attached to a clamp pivoted to the toe and heel tip, and passing over the feet, the device being more especially designed for the use of children in the sport called "coasting" or sliding down hill upon a sled.

Claim.—The use of adjustable metallic tips and heels, for the protection of boots and shoes, when constructed and operating in the manner and for the purposes herein specified.

No. 36,124.—T. G. HAROLD, of Brooklyn, N. Y., assignor to Himself and CHARLES PERLEY, of New York, N. Y.—*Improvement in Locks.*—Patent dated August 5, 1862.—This invention consists in the employment of two or more concentric tumblers, one or more of the same being provided with a pipe-shaped arbor passing the arbor of the other tumbler, whereby the turning of one tumbler tending to move the other, prevents more than one tumbler from being set at a time, and the two tumbler arbors being together, it is nearly impossible to determine which one may be correctly placed for unlocking. Upon the said tumbler is a flange, whereby a hasp such as is used in a padlock or trunk lock can be held within the lock, and around said flanges are decoy or blind notches, so that the position of the true notches cannot be ascertained by feeling. The case of the lock is secured together by a double screw flange that is prevented from turning by the entering of the hasp, but when the lock is open the case can be unscrewed and the lock changed in its combination.

Claim.—First, uniting and retaining the external plates *a* and *d'* of the lock together by means of the flanges *b* and *c*, screw threaded, or with lugs formed thereon as described, and hasp *e*, substantially as set forth.

Second, two or more circular tumblers with turned-up flanges placed one within the other, and each connected with a separate dial or pointer, in combination with the lock case, constructed as above set forth.

Third, in combination with circular tumblers with turned-up flanges and hasp *e*, formed as described, the decoy notches and teeth formed on the inner sides of the said flanges, for the purposes specified.

No. 36,125.—ELIZABETH HIGGINS, of Boston, Mass., assignor to HENRY HIGGINS, of the same place.—*Dress Protector.*—Patent dated August 5, 1862.—This article is intended for the use of infants, to protect their clothes and the dresses of their nurses, and is made from one piece of thin India-rubber cloth or oiled silk cut in a peculiar manner.

Claim.—As a new article of manufacture, the dress-protecting breeches constructed as described.

No. 36,126.—JOHN A. PRESTON, of Boston, Mass., assignor to the NEW ENGLAND GLASS COMPANY, of the same place.—*Improved Bottle Stopper.*—Patent dated August 5, 1862.—The nature of this invention consists in attaching the glass ball or valve to the stopper by means of a wire, chain, or thread, instead of a glass stem, as in a previous patent to the said Preston, in order to adapt the same to bottles of small size.

Claim.—The glass stopper B in combination with the glass ball or valve C, secured thereto by the wire *d*, or its equivalent, a chain or thread attached at *e* to the ball and connected at its lower end to a wire or cross brace which prevents the ball from falling entirely out from the stopper, substantially as specified.

No. 36,127.—J. M. STIVEN, of New York, N. Y., assignor to Himself, MICHAEL TUOMEY, and JOHN ELDER, Jr., of the same place.—*Improvement in Air Valves for Steam Apparatus.*—Patent dated August 5, 1862.—The object of this invention is to provide a means for the admission of air to a coil of steam-pipe such as is used in a heating apparatus to prevent the formation of a vacuum when the same is allowed to cool down at nights, or when the steam is shut off, which is effected by the employment of a cylindrical valve between a seat and a pipe that enters within said cylinder valve, the latter being so balanced that the escape of air will not cause it to move, but the impact of water striking within said cylinder, or the pressure of steam, forces the valve to its seat, and retains it there until the condensation of the steam, caused by the cooling of the apparatus, causes a sufficient vacuum to allow the atmospheric pressure to open the valve and admit air to the pipes.

Claim.—Cylinder valve *f*, in combination with the pipe *c* and seat *e*, as and for the purposes specified.

No. 36,128.—J. M. STIVEN, of New York, N. Y., assignor to Himself, MICHAEL TUOMEY, and JOHN ELDER, Jr., of the same place.—*Improvement in Fire Regulators for Steam Boilers.*—Patent dated August 5, 1862.—This apparatus consists of a cylinder and piston acted upon by water that is transmitted under pressure from the boiler through a pipe communicating with the lower portion of the water space of the boiler, the said piston being provided with a rod and adjusting screw to regulate the action of a spring and cause the apparatus to be operative by means of different degrees of pressure in the boiler, and the motion thus obtained and regulated is applied through the medium of a lever and suitable connexions to open and close the fire door, the ash door, the flue damper, or the cold air damper, thus causing the pressure in the boiler to become an automatic regulator of the heat through the inlets to, or outlets from, the furnace, or both.

Claim.—The cylinder *d*, piston *f*, and chamber *b*, or its equivalent, in combination with the lever *k* and a communication to the dampers or doors employed in a steam apparatus for regulating the draught of air according to the pressure of water in the cylinder *d*, as set forth.

Also, the screw *p*, spring *l*, and index, in combination with the cylinder *d*, piston *f*, rod *g*, and lever *k*, for the purposes and as set forth.

No. 36,129.—JOHN HATCHER, of Brooklyn, Ohio, assignor to Himself and GEORGE LYON, of the same place.—*Improved Washing Machine.*—Patent dated August 5, 1862.—In the top and centre of the frame is journalled a fluted roller, upon either side of which is an adjustable fluted rubber hung upon a journal at the inner end of adjusted rods passing through guides in the top of the frame, the said guides being pressed towards the roller by coiled springs around adjusting rods. The pressure may be regulated by means of a thumb screw in a stationary nut on the frame.

Claim.—The adjustable rubbers D D, the springs F, and adjusting screws E, in combination with the fluted roller C, portable frame A, and hooks B, arranged and operating as and for the purpose specified.

No. 36,130.—W. H. VAN NORTWICK, of Bordentown, N. J., assignor to Himself and R. S. VAN RENSSELAER, of the same place.—*Improved Reclining Chair.*—Patent dated August 5, 1862.—This invention will be understood by reference to the claim and engraving.

Claim.—First, so hinging the front of the seat and the lower end of the back to the legs, or to any substitutes for the same, that, on lowering the seat the back will be lengthened, and on raising the seat the back will be shortened, as set forth.

Second, in combination with the back and seat hinged to the legs or their substitutes, as set forth, the arms F and G and rods H H, or their equivalents, whereby the movement of the back and that of the seat are rendered simultaneous and dependent on each other.

Third, the self-locking device, composed of the rods M and M', lever L, and spring N, or their equivalents, when applied to and combined with the hinged seat E and arms G, substantially as specified.

No. 36,131.—WILLIAM ZETTLE, of Cincinnati, Ohio, assignor to Himself and JOHN H. STALLO, of the same place.—*Improved Jar for Provisions, &c.*—Patent dated August 5, 1862.—The cover of the bottle is formed with a central boss upon its upper surface, and with two inclined projections leading from opposite sides of the boss. Upon these inclined projections are studs. The cover is secured to the bottle by means of a clamp, consisting of an arched middle portion with a central crimp, and two downwardly projecting portions provided at their lower ends with lips turning inwardly and extending under the rim of the bottle neck. The clamp is locked by turning it so as to bring its uncrimped portion opposite the studs on the cover.

Claim.—First, the combination of cover C, having the boss E, inclined planes F, and studs G, with the binding and locking clamp H I *i* J *j*, for application to a rimmed jar, or like vessel, in the manner set forth.

Second, the construction of the cover C, with wedge-shaped projections F F, in combination with the clamp H, and the neck of the jar, as shown and described.

No. 36,132.—JOHN ABSTERDAM, of New York, N. Y.—*Improved Composition for Covering Projectiles.*—Patent dated August 12, 1862.—The nature of this invention is explained by the claim.

Claim.—A composition of sulphur and plumbago for coating, covering, banding and cementing cannon, mortar and small fire-arm projectiles, substantially as described.

Also, a composition of sulphur and steatite for coating, covering, banding and cementing cannon, mortar and small fire-arm projectiles, substantially as described.

Also, the employment of sulphur, in combination with mineral or earthy substances, to form a material or composition for coating, covering, banding and cementing cannon, mortar and small fire-arm projectiles, substantially as described.

No. 36,133.—A. P. ALLEN, of Niagara, N. Y.—*Improvement in Railroad Journal Lubricator.*—Patent dated August 12, 1862.—Within an ordinary journal box is a chamber closed at the bottom and open at the top, to receive the cap and brass piece within which the axle revolves. Directly under the said journal is an oil reservoir provided with one or more rollers, which are in contact with the journal, so that as the rollers revolve the oil is carried up and applied to the journal. The reservoir is kept up to its proper position by means of springs bearing upon its under side.

Claim.—The use of one or more rollers revolving in the reservoir E, together with the springs L L, or their equivalent, when used in combination with the oil-tight chamber C, substantially as and for the purpose specified.

No. 36,134.—S. F. AMBLER, of Brooklyn, N. Y.—*Improvement in the Manufacture of Aerated Bread.*—Patent dated August 12, 1862.—This invention consists in the use in the manufacture of unfermented bread, of carbonic acid gas made by fermentation from saccharine or farinaceous matter, instead of that made from sulphuric acid and the carbonate of lime.

Claim.—In the manufacture of unfermented bread, the use or employment of the carbonic acid gas made as herein fully described, for the purposes specified.

No. 36,135.—E. BEEMAN, of Owego, N. Y.—*Improvement in Hand-Drills.*—Patent dated August 12, 1862.—This invention consists in rotating a drill-stock in a brass frame constructed as shown in the engraving, by means of a cord passed around a wheel or pulley upon the drill-stock, and also passing around pulleys in the frame and one near the handle.

Claim.—The manner of rotating a drill-stock by means of a cord passing around it and around pulleys, making it a convenient and durable tool, as above described.

No. 36,136.—T. E. C. BRINLEY and J. G. DODGE, of Louisville, Ky.—*Improvement in Ploughs*—Patent dated August 12, 1862.—This invention relates to a method of attaching a landside or bar to the short landside or mould-board so as to admit of the landside being readily detached, if broken, and a new one adjusted in its place. A brace rod *a* is so arranged between the handles as to insure a firm fastening of one of the handles into loops at the rear of the mould-board and serve as a brace between the mould-board and heel of the landside.

Claim.—The lock joints, as shown in fig. 5, shown by the letters *d e f* and *g*, in connexion.

Also, the arrangement of the brace, round or rod *a*, so that it operates both as a brace and fastening of the handle A' into the loops *c c*.

No. 36,137.—W. L. BURT, of Cambridge, Mass.—*Improvement in Street Railway Carriages.*—Patent dated August 12, 1862.—The object of this invention is to dispense with a switch at the junction of street railways and a turnout thereof, and it consists in placing a deflector upon the ground near the junction of the outer or inner rail, and projecting above the rail, so that a roller placed in front of the wheels upon an arm extending down from a lever frame supported upon the front axle and coming in contact with the deflector shall give the car a direction to the proper track. The lever frame is connected to a pitman in such a manner that it can be operated by the driver's foot.

Claim.—The combination and arrangement of the roller or rollers D with the carriage or the truck frame and its appendages, and also with the deflector I, arranged with the main track and the turnout, as set forth, the whole being so as to operate substantially as specified.

Also, the application of the lever frame E to the carriage axle and its wheels, in manner so as to be capable of operating with respect to the same substantially as described.

No. 36,138.—VALENTINE CHASE, of St. Mary's Parish, La.—*Improvement in Tenoning Machines.*—Patent dated August 12, 1862.—The nature and object of this invention are explained by the claim.

Claim.—The combination of saws upon the adjustable plates, or their equivalents, by which the sides and shoulders of tenons may be cut at one operation, and whereby tenons of different sizes are made; the tenon being cut and completed by one movement of the timber, all substantially as described.

Also, in combination with the saws and adjusting plates, by which the size of the tenon may be varied, the adjusting slots and screws in and shifting position of plates 3 and 4, by means of which the edges or peripheries of the saws which form either side and shoulder of the tenon may be adjusted to the same vertical line, and thus compensate for the wear of the saws, substantially as described.

Also, the construction and arrangement of the plates 1, 2, 3, and 4, operated in the manner and for the purposes specified.

No. 36,139.—N. B COOPER, of Gratis, Ohio.—*Improvement in Cultivators.*—Patent dated August 12, 1862.—The standards to which the shovels are attached are secured to a slotted beam A in such a manner as to admit of their being moved in the same. The beam A is connected at one end to a rod B provided with holes at its front end fitting upon a pin, by means of which the slotted beam can be adjusted to rows of different widths.

Claim.—The arrangement of the slotted beam A, adjustable rod B, and beam C, for the purpose and in the manner herein set forth and described.

No. 36,140.—J. H. COTTON, of Boston, Mass.—*Improvement in the Manufacture of Iron Tubing.*—Patent dated August 12, 1862.—In this invention short and thick iron tubes are used, which, after being annealed, are tinned inside and outside. They are then drawn when cold through dies upon steel mandrels, whereby they are increased in length and decreased in thickness to the desired degree.

Claim.—Coating iron tubes, as set forth, and subsequently drawing them, while cold, through dies, in the manner specified, thus producing a tube perfectly cylindrical and smooth upon both its inner and outer surfaces.

No. 36,141.—R. T. CRANE, of Chicago, Ill.—*Improvement in Steam or Hot Air Pipes.*—Patent dated August 12, 1862.—Between the ends of the heating tubes are arranged one or more partitions combined with two or more inlets and two or more outlets in such a manner that steam or hot air admitted through either inlet, passes through a portion of the pipes only, by which means a portion of the pipes can be heated, while the rest remains cold, and the heat be thereby regulated at pleasure.

Claim.—The arrangement of one or more partitions *a a'* in the interior of the T-connexions B B', and between the ends of heating pipes A A', in combination with inlet openings *d e* and outlet openings *d' e'*, substantially as and for the purpose shown and described.

No. 35,142.—L. and P. K. DEDRICK, of Albany, N. Y.—*Improvement in Horse-power Windlass.*—Patent dated August 12, 1862.—This invention is designed to be applied to the

lifting of weights and the operating of presses such as have their followers arranged to work from the bottom of the press box upwards, whereby the weights may be lowered at any speed, and the follower allowed to fall when necessary without backing the horses, and it consists in so constructing the machine and connecting it with the horse-power as to admit of its being released from the latter at any moment at the will of the attendant.

Claim.—First, the combination of the wheel B, sweep D, and slide F, or its equivalent, arranged as shown, to admit of the connecting of the wheel to the sweep and the detaching of the former from the latter, for the purpose herein set forth.

Second, the cross-bar E, attached to the sweep D, and provided with shoes *g g*, arranged relatively with the wheel B to serve in connexion with the sweep, as a brake for the latter, as set forth.

Third, the slide F, attached to sweep D, and the lugs *d*, and flanch *c*, on the wheel B, arranged as shown, to admit of a ready connexion between the sweep and wheel, and to keep the former in proper position with the latter, as set forth.

No. 36,143.—OTTO ERNST, of New York, N. Y.—*Improvement in Apparatus for giving Vent to Barrels of Beer and other Liquids.*—Patent dated August 12, 1862.—This invention consists of an apparatus whereby the pressure from a head of water is made to force beer or other liquid out of a barrel into a glass or tumbler through the agency of air, which is effected by means of a pipe communicating with any suitable supply of water, and provided with a faucet, from which latter leads a pipe connecting with a two-way bung or plug *c* introduced into a large vessel. This plug *c* forms an inlet for the water and an outlet for the air by a pipe to a flexible tube that leads to the beer barrel, where it is introduced by means of a plug or bung.

Claim.—The arrangement of the vessel *d*, water pipe *b*, air pipe *e*, and two-way plug *c*, in combination with the barrel *f*, of beer or other liquid, for the purposes and as specified.

No. 36,144.—DANIEL FASIG, of Rowsburg, Ohio.—*Improvement in Lifting Jack.*—Patent dated August 12, 1862.—Within a socket or stock, provided with a rack and a spring stop, is a vertical rack bar B, attached at its upper part to a lever. At the end of this lever is also pivoted a swinging pawl bar D, engaging with a rack on the rear of the socket, and operated by a rod in a groove upon the upper side of the lever, so that by the movement of the lever the upper ends of the rack bar B and pawl bar D will alternately act as fulcra to the lever in raising the article to be elevated.

Claim.—The combination of the sliding rod *g* and swinging pawl bar D, with the lever E, rack bar B, hollow rack stock A, and spring catch *b*, as and for the purpose herein shown and described.

No. 36,145.—THOMAS FISLER, of Camden, N. J.—*Improved Circular Washboard.*—Patent dated August 12, 1862.—This invention consists in the employment of two circular racks, arranged one within the other, and so as to be readily adapted to an ordinary wash-tub.

Claim.—The combination of the two circular racks, so as to form a circular washboard, to be used in connexion with the wash-tubs in common use, arranged substantially as set forth and for the purpose specified.

No. 36,146.—B. W. FRANKLIN, of New York, N. Y.—*Improved Vulcanizing Heaters or Boilers*—Patent dated August 12, 1862.—This apparatus is formed of two or more seamless cups or vessels fitting one within the other and provided with a cover. The cups or vessels are flanged at their upper ends and secured to a ring or collar. The cover is provided with a groove to receive a packing, and with ears or nuts projecting at an angle so as to receive nuts, the inner sides of the heads of which bear against the collar, by which means the cover is firmly secured to the cups.

Claim.—The combination of two or more seamless cups or vessels H H and the cap or cover C, as above described, the whole, when in combination and secured by the bolts or screws E E E E E, constituting a vulcanizing boiler, substantially as set forth and specified.

No. 36,147.—D. L. GROVER and L. S. WRIGHT, of Groton, N. Y.—*Improvement in Churns.*—Patent dated August 12, 1862.—This invention consists in the employment of two sets of beaters, the outer edges of which diverge from the upper towards the lower ends, and attached to shafts geared to revolve in opposite directions to each other, in combination with corresponding stationary beaters placed in each corner of the churn; by which means the cream will be violently agitated at the bottom, and gradually less so towards the top, so that the butter as it forms can be easily taken from the tub.

Claim.—The combination of the revolving conical beaters F and G, running in opposite directions, with the stationary beaters L placed in the corners of a square churn, as and for the purposes described.

No. 36,148.—M. F. HARDY, of Seward, N. Y.—*Improvement in Revolving Ordnance.*—Patent dated August 12, 1862.—This invention relates to that class of breech-loading ordnance in which is employed a horizontal circular turntable, with a series of breech-pieces or

charge receivers mounted around the outer upper rim thereof, so as to be successively brought in line with and forced into the open rear end of the cannon.

Claim.—First the locking yoke and spring hammer combined, substantially as and for the purpose set forth.

Second, the combination of the turntable F, slides E, series of breech-pieces G G, cannon C, and combined yoke and hammer D D′, substantially in the manner and for the purposes described.

Third, the combination of the hinged yoke D, crank shaft I, cams J J, connecting rod *j*, and hand lever K, with the cannon C and turntable F, substantially in the manner and for the purposes described.

Fourth, the lever M, with its pawl *o* and projection *o*4, in combination with the bevel notches *p* of the turntable, and the incline *o*2 of the strap *f* and the stop *o*3 of the slide, substantially in the manner and for the purposes described.

Fifth, the combination of the forked lever L, stock B, slide E, and turntable F, substantially in the manner and for the purpose described.

Sixth, charging the breech-pieces with balls, substantially as described.

Seventh, the construction of the ball-charging device, substantially as described.

No. 36,149.—MOSES C. HAIGHT, of Buffalo, N. Y.—*Improved Ankle Support for Skates.*—Patent dated August 12, 1862.—This device is designed as a leg supporter for the use of skaters, and consists of a plate fitting under the heel of the boot and attached at its rear end to a metal support extending up the back of the leg to a point near the knee joint, where it is secured to the leg by a strap.

Claim.—The device consisting of the parts A B C D E F and G, constructed and arranged as described.

No. 36,150.—C. I. HAYES and MARTIN NEWMAN, of Unadilla, N. Y.—*Improved Machine for Edging and Slitting Boards.*—Patent dated August 12, 1862.—This invention consists in the employment of two circular saws upon one mandrel, one of which is so arranged as to be rendered adjustable longitudinally upon the mandrel for the purpose of edging boards of different widths, making both edges parallel with each other.

Claim.—The construction of a machine, as described, having two saws on one mandrel, one of which is movable and adjustable, as and for the purpose described.

No. 36,151.—JOHN HEWITT, of Carmichael, Pa.—*Improvement in Churns.*—Patent dated August 12, 1862.—This invention will be understood by reference to the claim and engraving.

Claim.—The combination and arrangement of the devices C *d e* E *f g* B D *i i b*, with the blades H H′ H2 H3, and pins I I, and the churn box A, all constructed in the manner and for the purpose described.

No. 36,152.—B. B. HOTCHKISS, of Sharon, Conn.—*Improved Metallic Defensive Armor.*—Patent dated August 12, 1862.—This invention consists in overlapping inclined and superimposed armor plates, so that a portion of the edges of each only is exposed, and that such edges, when struck by a flat-headed bolt or other projectile having sufficient power to penetrate, will become detached and form a shoe or false joint for the projectile, from which it glances upon the next plate, where it is also deflected and prevented from doing other damage.

Claim.—The arrangement of the plates 1 2 3, &c., upon the inclined sides of vessels and fortifications, so that the lower plates shall overlap upon the higher, in the manner and for the purpose herein set forth.

No. 36,153.—F. J. HUBER, of Cleveland, Ohio.—*For Artificial Stone.*—Patent dated August 12, 1862.—The nature of this invention is explained by the claim.

Claim.—An artificial stone composed of lias lime, coal ashes, and pulverized bricks, when this composition is used with or without the additional ingredients, substantially in the manner and for the purpose herein described.

No. 36,154.—F. J. HUBER, of Cleveland, Ohio.—*For Artificial Stone.*—Patent dated August 12, 1862.—This invention is explained by the claim.

Claim.—An artificial stone composed of lias lime and slate clay as the principal components, when the composition is prepared with or without the additional ingredients, substantially in the manner and for the purpose herein described.

No. 36,155.—F. J. HUBER, of Cleveland, Ohio.—*Improvement in Building Blocks.*—Patent dated August 12, 1862.—The grooves of the blocks within the wall and between the several blocks are filled with the mortar which is used in building the wall, thus serving to increase its strength.

Claim.—Forming a rectangular moulded building block with oblique grooves on two or more of its vertical sides, said grooves being at an angle with each other and with the edges of the building block, so as to form continuous oblique grooves across the face of the wall when laid in the usual way of bricklaying, substantially in the manner and for the purposes described.

No. 36,156.—ALFRED INGALLS, of Independence, Iowa.—*Improvement in Sugar Cane Crushing Mills.*—Patent dated August 12, 1862.—This invention consists in arranging a series of circular cutting blades upon shafts in such a relation to a pair of crushing rollers as to cause the cane to be slit previously to entering between the crushing rollers, thereby allowing the slitted cane to be spread over a greater space upon the rollers than the whole stalks would be.

Claim.—The revolving cutters C C, arranged and operated in combination with the pressing rollers A A′, as specified.

No. 36,157.—E. T. INGALLS, of Haverhill, Mass.—*Improved Hand Pegging Machine.*—Patent dated August 12, 1862.—This invention consists in arranging the awl and peg driver at an acute angle with each other, and so as to operate through one and the same hole leading out of the bottom of the peg-wood carrier.

Claim.—The above-described improved pegging machine, as made with the peg driver and the awl, arranged with respect to each other, and to operate in one hole, in the manner substantially as hereinbefore specified.

No. 36,158.—I. B. JONES, of Xenia, Ohio.—*Improvement in Cultivators.*—Patent dated August 12, 1862.—This invention consists in the employment of a laterally sliding plough frame placed within a mounted frame, and operated by a rock shaft, toothed segments, and racks under the control of the driver, so as to be readily made to conform to the unevenness of the rows.

Claim.—The laterally moving or adjustable plough frame D, when operated as shown, to wit: by means of the tooth segments E E on the rock shaft F, gearing into the racks *d d* on the frame D, and the latter fitted in the mounted frame A, as and for the purpose set forth.

Also, the manner of attaching the plough standards H to the frame D, to wit: by placing the standards in guides *i*, attached to pendants I secured to the frame D, and securing the standards at any desired height by means of the catches J, as and for the purpose specified.

No. 36,159.—W. M. JONES and S. E. TYLER, of Horicon, Wis.—*Improvement in Seeding Machines.*—Patent dated August 12, 1862.—This invention relates to a seeding machine for sowing seed broadcast, and it consists in a means for discharging the seed from the seed box or hopper, whereby the discharge of the seed may be graduated as desired, so as to sow a greater or less quantity on a given area, and the seed distributing apparatus be prevented from becoming choked or clogged, and also from being broken or bruised in being discharged, and at the same time be scattered or sown broadcast. The upper part of the seed cylinder and buckets is covered by a curved plate having upon its inner surface a recess to receive a curved plate, which serves as a gate, which is made to move with the seed cylinder.

Claim.—First, the cylinder I, with the curved buckets *k* attached, secured to a rotating and sliding or longitudinally adjustable shaft E, in connexion with the stationary head J and semi-cylinder K, provided with an opening *l*, all being arranged within a suitable box D, and in such relation with a seed box C as to operate in the manner and for the purpose herein set forth.

Second, the curved plate or gate L, placed or fitted within the semi-cylinder K, connected to the cylinder I, and arranged in relation with the opening *l* of the semi-cylinder K and the buckets *k*, to operate as and for the purpose specified.

Third, the arrangement of the clutch F, collar *e*, pinion *f*, and shaft E, as shown and described, for the purpose of admitting of said shaft being thrown in and out of gear with the wheel B′, and also admitting of said shaft being adjusted longitudinally when desired, as set forth.

No. 36,160.—ALEXIS LONGETT, of New York, N. Y.—*Improvement in Velocipedes.*—Patent dated August 12, 1862.—This invention consists in placing the propelling wheels of a light vehicle upon independent axles and communicating motion to them separately by cranks through intermediate gear wheels and sheaves.

Claim.—Mounting the carriage body on three wheels C C E, arranged on independent axles *a*, and imparting motion to two of said wheels C C separately by cranks J, through the medium of gear wheels *e f*, bands *n q*, and grooved pulleys or sheaves K *m s*, secured, respectively, on independent axles *l a o*, when said parts are arranged to operate in the manner and for the purposes specified.

No. 36,161.—P. W. MACKENZIE, of Jersey City, N. J.—*Improvement in Cantering Propellers.*—Patent dated August 12, 1862.—This invention consists in the arrangement of a universal joint connecting the hind legs of the horse, or the fulcrum of the vibrating toy, to the steering wheel in combination with a suitable steering gear, in such a manner that the steering wheel can be turned in either direction without interfering with the cantering motion of the horse. The upper ends of the fore legs are connected to the body of the horse by means of hinges or pivots, and their lower ends to cranks in the axle of the fore wheels in such a manner that during the operation of the toy, the motion of the fore legs of a cantering horse is imitated. Upon a platform under the horse's body is a foot-rest, or "false stirrup," which,

in connexion with the handle of the steering gear attached to the front part of the horse's body, is used to raise up the body of the horse, when the weight of the rider will again depress the same, alternating movements serving to keep the horse in motion. By means of double-armed levers and diagonal cords connecting the opposite ends of the levers, in combination with the handle and steering wheel, the horse can be turned to the right and left as desired.

Claim.—First, the arrangement of the universal joint *a*, in combination with the hind legs A′, or the fulcrum of the cantering toy, and with the steering wheel B, constructed and operating substantially in the manner and for the purpose described.

Second, the hinged legs A″, in combination with the body of the horse and with the cranks *c*, as and for the purpose specified.

Third, the arrangement of the foot-rests or false stirrups H, in combination with the handle I, constructed and operating substantially as and for the purpose set forth.

Fourth, the arrangement of the double-armed lever *e g* and diagonal cords *f*, in combination with the handle I and steering wheel B, constructed and operating substantially as and for the purpose shown and described.

No. 36,162.—MELCHOR MELLINGER, of Dayton, Ohio.—*Improved Clothes-Washing Machine.*—Patent dated August 12, 1862.—This invention consists in a combination of a corrugated plunger and press-board, the latter being provided with a slide, to which is attached a rod connected with the working lever by a link or hook. By detaching the hook the slide is readily withdrawn from the press-board, and the plunger is raised up out of the suds box by means of the lever, so as to admit of the clothes being wrung.

Claim.—The slide *k* fitted in the press-board H, and having the connecting rod I attached for the purpose of admitting of the removal of the connecting rod I and hook J for the adjustment of the plunger F out of the suds box, as described.

No. 36,163.—GORDON MCKAY and R. H. MATHIES, of Boston, Mass.—*Improvement in Sewing Machines.*—Patent dated August 12, 1862.—The nature and object of this invention are explained by the claim.

Claim.—So arranging and combining with a sewing mechanism, the projecting-rotating horn which encases and sustains the whirl or looper, and which supports the stock, that said horn can be rotated with the stock upon it, in reference to the needle and feeder, when it is desired to have the seam conform to curves or angles, instead of turning the stock upon the horn, or of turning the needle and feeder with reference to the horn. Also combining with the rotating projecting horn *e*, so as to rotate with it, a thread or bobbin, operating substantially as described, and also combining with the rotating projecting horn *e*, so as to rotate with it, a tension device which acts upon the thread, operating substantially as described.

Combining a rotary whirl or looper with a rotating horn, so that while the whirl has an intermittent rotary movement with relation to the needle, the horn can be rotated without changing the relative relation of the whirl and needle to each other, or, in other words, so that rotation of the horn shall not rotate the whirl, though supported by and held in the horn, and so that rotation of the horn shall not affect the intermittent rotary movement of the whirl.

Combining with the needle carrier of a sewing mechanism a lever which reciprocates said carrier, and which has its fulcrum so arranged as to be made movable for the purpose of changing the throw of the carrier.

The means described for varying the stroke of the needle, to conform to change in the length of the stitch, the same consisting of a stop made adjustable on the fulcrum bar to vary the distance between said stop and the fulcrum.

Regulating the amount of the thread drawn by the needle from the spool, so as to conform to varying thicknesses of stock, by automatically adjusting or varying the strokes of the needle by the thickness of the stock, at or near the point where the needle is operating, by substantially the means described, or any equivalents thereof.

So operating the presser foot as to lift it a fixed amount from the surface of the stock, no matter what its thickness, to relieve the thread from pinch between the bed and the under surface of the stock while the thread is drawing through the stock, substantially by the means described, or any equivalents thereof.

So combining the presser foot with the needle and the parts connected therewith, substantially by the means described, or by any equivalents therefor, that the resistance offered to the upward movement of the needle rests upon the presser to prevent it from being forced upward by the upward strain upon the stock, the presser being prevented from downward motion, substantially as shown.

Combining the lever which operates the presser with a movable and adjustable fulcrum, so that more or less lift can be given the presser by the positive movement imparted by a cam or other equivalent motor.

So combining the closing slide of the needle and the needle, substantially by the means described, or any equivalents therefor, that the stroke of the slide shall be increased or diminished automatically as the stroke of the needle is increased or diminished.

So combining the closing slide of the needle with the needle, substantially by the means described, or by any equivalents thereof, that said slide is so placed as to cover the eye or hook of the needle while emerging from the stock, and to move with the needle, keeping its eye or hook covered till at or near the termination of the upward stroke of the needle, when the slide moves relatively to the needle, uncovering its eye, and then, by moving downward with the needle, keeps its eye uncovered till the needle punctures the stock.

The arrangement of the separate instruments, the presser and feeder, directly in front of the hook of the needle, in proximity thereto, in the plane of the vibrations of the feeder, and above the stock to be sewed, so as to operate on the upper surface thereof, said plane passing through the axial line of the needle, substantially as described.

Controlling the extent of the feeding action of the feeder by making the presser adjustable toward and from the needle in the plane of vibration of the feeder, and by constructing the presser with an inclined surface next the feeder, substantially as shown.

The combination and arrangement of the spring *l* with the parts connected with the needle lever, so as to counterbalance the weight of said parts, so as to retain the needle at its up stroke till the check *j2* operates on the plate *d*.

No. 36,164.—CHARLES MONSON, of New Haven, Conn.—*Improved Rotary Engine.*—Patent dated August 12, 1862.—This invention consists of a series of cylindrical vessels or chambers connected together and provided with a central tubular shaft so applied as to be capable of revolving freely. Within each chamber two or any suitable number of curved arms are made to project from the shaft. On the outer end of the first chamber of the series is attached a steam chest which surrounds the shaft and receives a lateral induction pipe, through which the steam passes into the chambers and through a series of openings and the curved arms successively, until it has passed through a series of chambers to the eduction passage. The steam thus acting upon the curved arms causes them to revolve and carry the axle, the design being to increase the motive power by the combination of a number of arms or wheels under the influence of the same current of steam or other motive element.

Claim.—A repeating rotary engine, constructed in manner or so as to operate substantially as described, viz., of two or more sets of curved arms C, or their mechanical equivalents, a series of two or more tight chambers or vessels A A1 A2, and a shaft, or its equivalent, divided into separate chambers, and provided with induction and escape passages, the whole being arranged substantially as set forth.

No. 36,165.—A. F. W. NEYNABER, of Philadelphia, Penn.—*Improved Pendulum Paddles.*—Patent dated August 12, 1862.—This invention consists in the combination and arrangement of links, levers and chains, with a pair of pendulous paddle arms working in opposite directions so as to operate said paddle arms alternately and cause the paddles attached to the arms to open when the latter are moved in one direction, but to close and press against the water when they are moved in an opposite direction, thus exerting a continuous and even pressure against the water. By an arrangement of devices the action of the paddles may be reversed without reversing the motion of the engine which drives the apparatus.

Claim.—In combination with a pair of pendulum paddles, the arrangement of the levers and links F E I, cam D, rod S, and paddle *a*, substantially in the manner and for the purposes herein described.

Also, in combination with a pair of pendulum paddles, the arrangements of the shafts, levers and links K M N P R T, chains Q, cam D, and bars S, for the purpose of reversing the action of the paddles, when constructed and arranged substantially in the manner and for the purposes herein described.

No. 36,166.—HENRY PARSONS, of Waterloo, N. Y.—*Improvement in Harness for Looms.*—Patent dated August 12, 1862.—This invention consists in securing the heddle bars to the frame by means of flat springs which are sunk into the wood and secured at one end by screws, while the other or elastic end rests over the extremity of the heddle bar, fitting in its socket or mortise, and provided with a pin which passes through a hole in the end of the heddle bar and thus secures it in place. The opposite ends of the heddle bar are threaded and secured by nuts at the outer side of the frame, which nuts are kept from turning by means of a flat spring, the loose end of which presses upon one of the sides of the nut when screwed to its place.

Claim.—Securing the heddle bars to and detaching them from the frame by means of the springs C C, pins *c c*, and depressions *f f*, the whole arranged, combined and operating substantially as and for the purposes herein described.

Also, in combination with the nut *h*, the spring G, when the same are respectively connected with the heddle bars and frame, substantially as herein described.

No. 36,167.—MARTIN RAE, of Manchester, England.—*Improvement in Lamps.*—Patented in England September 16, 1861.—Patent dated August 12, 1862.—This invention consists in causing a current of air to impinge against the flame of a lamp by means of a small lamp, taper, or other heat-producing agent, placed within or under a tube or tubes communicating with the burner, which, upon being lighted, causes an upward current of air toward the flame at the burner.

Claim.—The employment or use of a lighted lamp, taper, or other heat-producing agent at the bottom of or into the air tube or air tubes of the lamp, arranged to operate in the manner as and for the purpose herein set forth.

No. 36,168.—D. C. RAND and M. WADHAMS, of Perinton, N. Y.—*Improved Water-tight Casks.*—Patent dated August 12, 1862.—The object of this invention is to render a cask, which is designed to contain materials that readily absorb moisture, impervious to water either when immersed or by the gradual absorption of the atmosphere, which is sought to be effected by coating the interior surface of the cask with a resinous cement so as to thoroughly fill the pores and joints.

Claim.—A close cask, rendered impervious to moisture by a coating of concentrated coal tar, substantially as and for the purposes herein set forth.

No. 36,169.—J. L. REID, of Van Wert, Ohio.—*Improvement in Bee Hives.*—Patent dated August 12, 1862.—This device is composed of an inclined screen whose meshes are too small for a bee to pass through, covering a box extending over the bottom of the bee apartment. The door of this trap is wide so as to admit moths which lay their eggs among the comb droppings that fall through the screen, when both moths and eggs may be easily destroyed.

Claim.—The combined moth and robber trap and ventilator, Fig. 3, constructed and applied in the manner and for the purposes specified.

Also, the combination of the moth and robber trap and ventilator with the hive, constructed substantially as set forth.

No. 36,170.—ANSON ROWE, of Atallissa, Iowa.—*Improvement in Handles for Millstone Picks.*—Patent dated August 12, 1862.—The head of the handle or stock is constructed with an adjustable key or block, so arranged that the mortise which receives the double tapered pick may, without any special manipulation on the part of the operator, be adapted to suit the precise form of the pick so that the latter can be firmly secured in the handle, the object being to admit of picks which are forged by hand without the aid of gauges, being readily adapted to the stock or handle without the necessity of a nice adjustment.

Claim.—The adjustable key or block B, fitted in a slot *c*, in the hub or head *b* of the handle or stock A of a millstone pick, substantially as and for the purpose herein set forth.

No. 36,171.—G. S. RUST, of Chester, Ill.—*Improvement in Convertible Apple Mills, &c.*—Patent dated August 12, 1862.—This invention consists in the construction and arrangement of certain devices which in certain relations with a proper framing, constitute a machine for grinding apples, and by the removal of certain parts and the substitution of others, the machine may be employed for shelling corn and for cutting straw.

Claim.—First, the combination of the rocking beam L, crank shaft E, disconnectible pitman F, shaft H, and cylinder heads *a a*, for the purpose and in the manner described.

Second, the combination of the rocking beam L, crank shaft E, and disconnectible pitman F, constructed and arranged in the manner and for the purpose set forth.

No. 36,172.—SYLVANUS and A. M. SAWYER, of Fitchburg, Mass.—*Improvement in Combined Time and Percussion Fuze for Explosive Shells.*—Patent dated August 12, 1862.—This invention consists in a method of confining in one fuze stock both a time fuze and a percussion fuze, so that the explosion of the shell may be made to take place either before or after striking an object.

Claim.—The combination in one fuze stock of a percussion fuze with a time fuze, substantially as described.

No. 36,173.—J. L. SCHOONMAKER, of Galupville, N. Y.—*Improved Washing Machine.*—Patent dated August 12, 1862.—This invention consists in applying to the convex rubber of a washing machine a weight which is placed above the cross-bar and connected to the convex rubber by means of rods placed one on each side of the same for the purpose of preventing the rubber from rising. A weight is also placed at one end of the convex rubber to form a counterbalance for the handle.

Claim.—The application of the weight F to the convex rubber D, in combination with the counterbalance weight L, substantially as and for the purpose specified.

No. 36,174.—J. Q. A. SCOTT, of Pittsburg, Pa.—*Improvement in Magazine Fire-arms.*—Patent dated August 12, 1862.—This invention relates to the supplying of cartridges to the barrel through the breech, from a magazine in the stock, by means of an endless chain working in the magazine, and the invention consists in the employment of certain devices in combination with the breech for the purpose of giving the said chain the necessary movements and conveying the cartridges from the belt into the chamber of the barrel. In combination with the cartridge magazine in which the endless chain feeder works, and arranged at its side, is a second cartridge magazine separated from the first by a partition which is movable for the purpose of transferring its cartridges into the first one as soon as it is emptied.

Claim.—First, the combination of the magazine F, containing an endless chain feeder, the longitudinally moving breech pin D, the side passage *k*, the spring *n*, and the slide *k*, the whole arranged and operating substantially as herein described.

Second, the employment for locking and unlocking the breech pin D, and opening the breech of a bolt *f*, lever E, and link *e*, the whole combined with the breech pin, and applied in relation to a hole or notch *g* in the fixed portion of the breech, and operating as herein set forth.

Third, the combination with the endless chain feeder and its magazine F, of a second cartridge magazine L, constructed with partitions *t t* corresponding with the feeding plates of the endless chain and a sliding plate M, or other movable partition, the whole arranged substantially as herein specified, to allow the cartridges to be transferred in a proper manner from the interior of one magazine to the endless chain of the other one, as herein set forth.

No. 36,175.—S. J. SEELY, of Brooklyn, N. Y.—*Improvement in Sheet Metal Casks.*—Patent dated August 12, 1862.—The nature and object of this invention are explained by the claim.

Claim.—First, a cylindrically shaped cask, the external convex surface of which is composed of sheet metal with transverse corrugations extending in a continuous series from one chime thereof to the other, when such corrugations are so constructed that the salient corrugations of one cask shall fit into the venting corrugations of that which is next, (if made of the same pattern,) and so that a rank of such casks shall interlock firmly with each other and pack closely together, substantially in the manner and for the purpose above described.

Second, in a cask of a cylindrical shape, the external convex surface of which is composed of sheet metal transversely corrugated, the insertion of a plain internal or lining cylinder, made to fit snug and tight to the external cylinder by which it is supported, the whole being firmly attached together at the chime, substantially as described.

Third, in a cask constructed of sheet metal, the insertion of heads of sheet metal made sufficiently concave to prevent being bent outward by the internal pressure of the fluid which may be contained in the cask, and having flanges bent down at nearly right angles to their respective surfaces, and so shaped as to be readily fitted and riveted, or otherwise cemented to the chimes of said cask, substantially as described.

Fourth, in a cylindrical metallic cask in which the head is made slightly concave, and is constructed with a flange fitting the chime of the cask as above described, making the diameter of the head proper, larger than the internal diameter of the cask, in combination with a groove or corrugation fitted to receive it, so that when such head is sprung into the cask, it shall find a firm shoulder, and make a closer joint when any internal pressure is brought against the head, as hereinbefore described.

Fifth, in a cylindrical corrugated cask, constructed as hereinbefore described, in which the bung hole is placed upon the convex side thereof, surrounding it with metallic supports, composed of two parts attached together and fitting the corrugations of the body of the cask, substantially as above described.

Sixth, in a metallic cylindrical cask having the bung hole upon its convex cylindrical surface, and so constructed as to be nearly flush with that surface, so connecting the bung that it will be somewhat depressed beneath the cheeks which surround the hole, so as to be protected by those cheeks when the cask is rolled over an even surface, substantially as described.

No. 36,176.—E. L. SEYMOUR, of New York, N. Y., assignor to L. F. THERASSON and HIRAM KETCHUM, Jr. of the same place.—*Improved Mode of Sifting and Bagging Grain.*—Patent dated August 12, 1862.—This invention will be understood from the claim.

Claim.—The combination of two, three, four or more inclined sifting surfaces of increasing graduated length, with respective solid prolongations and delivery troughs arranged one above the other, so that the coarsest sieve shall be at the top, and the finest at the bottom, as described and for the purposes described.

No. 36,177.—J. C. STANLEY, of Lawrence, Mass.—*Improvement in the Bobbins of Throstles for Spinning Machines.*—Patent dated August 12, 1862.—In carrying out this invention, the lower one of the two heads of the bobbin, is provided with a cylindrical chamber or recess extending upward from the lower surface of the head and concentric with the spindle passage of the bobbin. Within the said chamber, or recess, is a washer upon which the head is supported, the chamber being a little larger in diameter than the washer, so that the latter, with its sustaining disk, will be protected circumferentially. During the rotation of the flier the flat surfaces of the chamber and washer will tend to produce friction on the washer and effect a steadier draught on the yarn.

Claim.—The improved arrangement of the friction washer *d*, or the same and its disk *e*, relatively to the bobbin head *b*, viz., so as to extend up into and be capable of operating therewith, substantially in the manner and for the purpose as described.

No. 36,178.—THOMAS STIBBS, of Wooster, Ohio.—*Improvement in Looms.*—Patent dated August 12, 1862.—This invention consists in an arrangement of bands, pulleys, levers, and cams, in combination with the treadle frames, for the purpose of rendering the operation of the harnesses for plain or fancy weaving easy and free from jarring motion, and affording facility of adjustment when necessary.

Claim.—First, the arrangement of the bands *a b* and pulleys I J K L, in combination with each other and with the heddle frames of the loom, substantially as and for the purpose herein specified.

Second, the arrangement of the cam shaft E, cams D D' D2 D3, and levers M M' M2 M3, in combination with the bands *a b* and pulleys I J K L, substantially as herein specified.

Third, the arrangement of the band *t*, lever N, and cam C, for working the rock shafts and rollers which carry the selvedge heddles, substantially as herein specified.

No. 35,179.—G. W. THOMPSON and A. H. ROGERS, of Marion, Iowa.—*Improved Sugar Juice Evaporator.*—Patent dated August 12, 1862.—This invention consists in the employment of a revolving skimmer formed of a longitudinal section of a cylinder hung upon a rod passing through it lengthwise, and provided with a crank by which it is turned, which operation serves to remove the scum from the surface of the juice. The skimmer is also provided with a bail by which it is raised from the heater. The furnace is supplied with two chimneys, in each of which is a damper so arranged, in connexion with a damper in the furnace, as to retain the heat under the heater or under the sirup pan, or allow it to be passed through the whole length of the furnace, as may be desired.

Claim —First, the revolving skimmer B or its equivalent, in combination with the bail C, to be operated in the manner and for the purposes herein set forth and described.

Second, the two chimneys with the accompanying dampers, in combination with damper in the furnace, as herein specified.

No. 36,180.—E. S. TICHENOR, of Jacksonville, N. Y.—*Improvement in Cultivators.*—Patent dated August 12, 1862.—The front standard of this implement is attached to the plough beam by means of a hinge joint, and upon the sides of this standard, springs attached to the side beams are made to bear, for the purpose of guiding or steadying the same.

Claim.—The combination of the springs *c c* or their equivalents, with the hinged tooth of a cultivator, substantially as above described for the purpose set forth.

No. 36,181.—G. N. TROWBRIDGE, of Rollinsford, N. H.—*Improvement in Shaft Coupling.* Patent dated August 12, 1862.—In carrying out this invention the male screw of one of the shafts—of which there is a series—is made equal in length to the female screw of the coupling-nut, while that of the other shaft is of less length than its corresponding female screw. The coupling screw is constructed with a cylindrical recess so as to cover and protect the threads of the entire screw, and also to pass upon the shaft like a sleeve while the coupling nut is screwed backwards in disconnecting the shafts from one another.

Claim.—An improved shaft screw coupling, having the male screw of one shaft equal in length to, and that of the other of a less length than, the female screw of the coupling nut.

Also, an improved shaft coupling, as constructed with the chamber or shaft recess *d*, and in other respects substantially as described.

No. 36,182.—W. P. TROWBRIDGE, of New York, N. Y.—*Improvement in Sounding Instruments.*—Patent dated August 12, 1862.—This invention relates to that class of instruments used for sounding, in which a helix or screw propeller is made to revolve by the action of the water upon the blades of the propeller; and the invention consists in the combination of the rising and falling blades with a framework and registering mechanism in such a manner that the whole weight of the lead and strain of the line is sustained by the framework, and not by the axis upon which the blade revolves; the said framework being composed of thin arched ribs which protect the blades and the wheel work from injury. An arrangement of devices is also employed whereby the registering mechanism is reduced to the smallest possible compass while its capacity and facility of operation are increased.

Claim.—First, the combination of the rising and falling propeller B and registering mechanism with the framework A, substantially in the manner and for the purpose described.

Second, the arrangement of the fixed stop *t'*, in combination with the swinging arm *l*, wheel *j*, and index *r*, as and for the purpose specified.

No. 36,183.—A. C. TWINING, of New Haven, Conn.—*Improvement in Condensers for Steam Engines.*—Patent dated August 12, 1862.—The nature and object of this invention are explained by the claim and engraving.

Claim.—First, the combination or use in a steam engine, of an exhaust pipe or steam chest, and a cold-water pipe or water chest, with a condenser, arranged with suitable orifices or pipes, one or more, between the condenser and the chests or pipes first named, to conduct the exhaust steam and condensing water separately, but in close proximity, into the condenser, substantially as and for the purpose described.

Second, the employment of a rotating apparatus, in combination with the condenser, to deliver the water and air, and to be rotated wholly or in part by the rush of the water of condensation, or by a pulley wheel and band, substantially as shown and described.

No. 36,184.—CHRISTIAN WAHL, of Chicago, Ill.—*Improvement in Extracting Oil from Pigs' Feet.*—Patent dated August 12, 1862.—This invention consists in subjecting the pigs' feet to an intense pressure in a hydraulic or other powerful press, to extract from them the oil contained therein, the portion remaining being then subjected to the usual "lining" process employed in the manufacture of glue, after which it is subjected to a boiling process.

Claim.—The process for treating pigs' feet for the extraction of their contained oil and gelatinous matter.

No. 36,185.—HENRY WALTER, Sr., of Elizabeth City, N. J.—*Improvement in Machine for Preparing Tobacco.*—Patent dated August 12, 1862.—This invention consists in passing

the leaves of tobacco between two rollers so arranged as to act upon and compress the stalks without touching or injuring the other parts of the leaf, for the purpose of flattening the stalks so as to admit of the whole leaf being used for fillers of cigars. At each side of the rollers are arranged scrapers, so that their edges may be brought in contact with the surfaces of the rollers, for the purpose of scraping off the gum which may adhere to the same.

Claim.—First, the employment or use, in preparing tobacco leaves, of rollers A A, or their equivalents, arranged substantially as and for the purpose described.

Second, the combination of the adjustable scrapers M with the rollers A A, as and for the purpose specified.

No. 36,186.—HENRY WILDE, of Newark, N. J.—*Improved Chamfering and Crozing Machines.*—Patent dated August 12, 1862.—This invention consists in affixing inclined curves to the movable lathe heads, for the purpose of insuring the correct chucking of the barrel or cask, enclosing the gearing with the ring mandrels, and employing rotating cutters to croze and chamfer the cask after it has been set up and arranged so as to operate while the cask is in motion.

Claim.—The inclined curves, the enclosed gearing and revolving cutters, when constructed, arranged, and combined substantially in the manner and for the purpose herein above set forth.

No. 36,187.—EMERSON WOOD, of Monson, Mass.—*Improved Carpet Stretcher.*—Patent dated August 12, 1862.—This device is composed of two adjustable-jointed arms, provided with spurs and attached to a horizontal extension shaft, which is fitted in a suitable frame and operated by a rack and toothed segment. The jointed arms may be secured in line with each other and at right angles with the bar, or placed at an angle with the bar by means of rods attached at one end to the said arms, and at the other end to a sliding collar fitted upon the bar.

Claim.—The bar F, fitted in the frame A, and provided with the adjustable toothed or spurred arms G G, arranged substantially as shown, and operated through the medium of the rack E and toothed segment D, in combination with the manner of adjusting the toothed or spurred arms G G, to wit: by connecting them to the slide or collar H, on the bar F, by rods I I, and securing the slide or collar on the bar by a pin *a**, as described.

No. 36,188.—E. T. WOODWARD, of Charlestown, Mass.—*Improved Can for Oils, Varnishes, &c.*—Patent dated August 12, 1862.—This invention consists of a tin can provided with a short neck at one corner of the upper side. Fitted around this can is a wooden box, cut away at one corner to admit of the neck of the tin can passing through.

Claim.—As a new article of manufacture, the above-described can A and box B, combined, the box being cut away for the passage of the neck *a* of the can, substantially as described.

No. 36,189.—L. J. ADAMS, of Cleveland, Ohio, assignor to Himself and C. L. PETTER, of Rochester, Ohio.—*Improvement in Water Elevators.*—Patent dated August 12, 1862.—The box which holds the crank end of the windlass shaft, has an elongated opening, which allows the shaft to rise sufficiently for the teeth of the ratchet wheel to clear the pawl. The end of the shaft is raised by a lever provided with a "packing," which latter acts as a brake upon the shaft. The pawl is provided with a counterbalance in order to keep its point in contact with the ratchet.

Claim.—First, the counterbalance pawl F and ratchet wheel E, in combination with the elongated opening in the box G, operating as and for the purpose specified.

Second, the elongated opening in the box G, in combination with the lever H and packing H', operating as and for the purpose specified.

No. 36,190.—JAMES CLEMENTS, of Ann Arbor, Mich., assignor to Himself and SEDGWICK DEAN, of the same place.—*Improved Can for Fluids.*—Patent dated August 12, 1862.—This invention consists in placing a glass, or other transparent material, within an opening on the side of the can, in order to ascertain the quantity or quality of the fluid contained in the can.

Claim.—As an improved article of manufacture, a covered or close can, provided with, or having inserted in its side, one or more plates of glass or other transparent material, substantially as and for the purpose set forth.

No. 36,191.—O. G. CRITCHETT, of Stoneham, Mass., assignor to Himself and C. C. DIKE, of the same place.—*Improvement in Eyelet Machines.*—Patent dated August 12, 1862.—This invention consists in the combination of devices for holding eyelets and feeding them successively forward upon an anvil, in connexion with a mechanism for retaining each eyelet on the anvil, and subsequently punching, setting, or compressing the same so as to secure it to an article when placed upon the anvil. Combined with the above is also an eyelet magazine or holder, with a separator and a carrier arranged and made to operate together. From the upper surface of the anvil projects a stud or pin, which receives the work, and upon which the eyelet is deposited by the feeding mechanism preparatory to each depression of the punch.

Claim.—A combination consisting of the mechanism for holding eyelets, and feeding them successively forward upon an anvil or its equivalent, and the mechanism for retaining each eyelet on the anvil and separating it from its feeding mechanism, and subsequently compressing it and setting it into an article when placed on such anvil, the whole being substantially as hereinbefore described.

The combination of the eyelet magazine D, a separator F, and a carrier G, arranged and made to operate together, substantially in manner and under circumstances as described.

The combination of the eyelet and work receiver or pin *a* with the anvil B and the eyelet feeding and setting machinery.

The combination and arrangement of the eyelet guide rod E with the eyelet magazine.

No. 36,192.—ANTONIO MEUCCI, of Clifton, N. Y., assignor to ANTONIO JANÉ, of Brooklyn, N. Y.—*Improvement in Kerosene Lamps.*—Patent dated August 12, 1862.—This invention consists in combining a plate of platinum with the wick tube of a lamp in such a manner that, when the lamp is lighted, the platinum shall be in contact with the base of the flame, for the purpose of enabling kerosene and other similar oils to be burned in lamps without the necessity of using a chimney.

Claim.—The combination of a plate of platinum (or other metal having the same qualities) with the wick tube of a lamp, substantially as set forth, the said plate being adjustable vertically.

No. 36,193.—A. B. NIMBS, of Buffalo, N. Y., assignor to Himself and J. C. CLIFFORD, of the same place.—*Improvement in Floating Grain Elevators.*—Patent dated August 12, 1862.—The nature of this invention is mainly explained by the claim. Above the deck of the vessel is a platform having a circular portion, which forms a bed, upon which a turntable revolves. An elevating leg is supported upon the turntable in such a manner as to admit of its being placed in any desired position to elevate grain from the vessel in which it is placed, or from a vessel at its side.

Claim.—First, supporting and operating the elevator leg upon a turntable, for the purposes and substantially as set forth.

Second, placing and using the discharging spout of the elevating leg in line with the centre of the turntable, so that any movement of the turntable and elevating leg will not change the relative position of the spout.

Third, the combination of a grain-elevating apparatus and bin, with a vessel, the elevating leg and bin being so placed and arranged that the bin shall be above the deck of the vessel, and sufficiently high, so that the grain may be discharged from the bin (or from the bin through the weighing scales) into a boat alongside, substantially as described.

Fourth, supporting the weighing scales upon a suspended platform, so that the scales and hopper will at all times maintain a perpendicular position, notwithstanding the listing of the vessel.

Fifth, the combination of a railroad track with a vessel and elevating apparatus, for the purposes and substantially as set forth.

No. 36,194.—R. H. PECK, of Wolcott, Vt., assignor to Himself, E. M. GIFFORD, and ORRILL WHITNEY, of the same place.—*Improvement in Vegetable Cutters.*—Patent dated August 12, 1862.—This invention consists in the arrangement of a suitable set of knives, upon a plate or piece hinged to the wheel, which plate may be adjusted in different positions so as to cut slices of different thicknesses as may be desired.

Claim.—The use of transverse cutters J, mounted upon the adjustable part G, and adjusted by the screw H, or its equivalent, in combination with the revolving wheel B and the hopper A, substantially as herein shown and described.

No. 36,195.—WILLIAM PETERS, of Baltimore, Md., assignor to Himself and ALFRED BUCK, of the same place.—*Improvement in the Manufacture of Fire-Bricks.*—Patent dated August 12, 1862.—This invention consists in making fire-brick of asbestos, combined with any of the earths, clays, mineral substances, sand, or ground or pulverized stones.

Claim.—Making fire-brick of asbestos and other material, substantially as herein set forth.

No. 36,196.—ELLIOT SAVAGE, of Meriden, Conn., assignor to CHARLES PARKER, of the same place.—*Improvement in Machines for Threading Wood Screws.*—Patent dated August 12, 1862.—The improvements claimed as new in this machine relate to that part of the operation which effects the cutting or chasing of the threads upon the screw blank, and the principal feature of the invention consists in the adaptation of mechanism to operate a single rotary cutter to which a positive revolving motion, as well as an onward feeding motion, is given, in order to effect the chasing of the thread upon the blank.

Claim.—First, so mounting the rotating cutter in its relation to the screw blank that the said cutter may have a positive rotary motion given to it, the speed of which shall be so varied automatically that whether cutting in a fixed spot or moving along the blank the velocity of rotation of said cutter shall be such as to cause its cutting edges always to correspond with the spiral threads as they are being formed upon the blank, irrespective of the speed with which said cutter is moved boldly along toward the point of the blank, substantially in the manner set forth.

Second, the construction and arrangement of mechanism, as herein before described, for imparting rotary motion to the cutter.

Third, connecting the cam *m* with the driving shaft *g*, by an arrangement of mechanism capable of being so adjusted as to produce a change in the speed of the cam, and in the extent of travel of the carriage, without changing the speed of the shafts *g* or *h*, substantially as set forth.

No. 36,197.—IRA W. SHALER, of Brooklyn, N. Y., and REUBEN SHALER, of Madison, Conn., assignors to IRA W. SHALER, aforesaid.—*Improvement in Compound Bullet for Small Arms.*—Patent dated August 12, 1862.—This projectile is composed of two or more parts, which fit the bore of the barrel, and so constructed that the forward end of each of the parts in the rear of the front one, enters a cavity in the rear of the one before it, and is formed in relation to the same in such a manner as to separate from it after leaving the barrel of the gun, and make a slight deviation in its line of flight from that of its predecessor.

Claim.—The projectile hereinbefore described, made up of two or more parts, each of equal diameter, constructed as set forth, so as to separate from each other as stated.

No. 36,198.—E. G. TOBEY, of Portland, Maine, assignor to Himself and JOSEPHUS NASH, of the same place.—*Improvement in Kerosene Lantern.*—Patent dated August 12, 1862.—To the inner flanch of the base trimming of the lantern is attached, by means of springs, a semi-spherical cap extending up into the globe of the lantern a sufficient distance to cover the burner of the lamp except the slitted apex of the cone, for the purpose of conducting the air to the flame, by causing it to pass through the perforations of the base support of the cone and directly to the base of the flame; the object being to prevent the smoking in kerosene oil lanterns.

Claim.—First, the combination of the fastenings *c c*, the flanch *a*, and the cap C, substantially in the manner and for the purpose described.

Second, the cap C, constructed and operating substantially in the manner and for the purposes herein described.

Third, the combination of lantern A, burner or lamp B, and cap C, substantially as described.

No. 36,199.—J. G. WILSON, of New York, N. Y., assignor to C. P. DIXON and EDWARD LEARNED, of the same place.—*Improvement in Knitting Machines.*—Patent dated August 12, 1862.—This invention relates to a substitute for the beaters or pressers employed in those knitting machines in which several needles are knitted upon at once with separate yarns to operate between the needles, for the purpose of holding the work to its proper place thereon, and it consists in substituting for the said beaters or pressers, a pad of India-rubber or other similar yielding substance so applied and having such a movement as to operate in combination with the needle-ring or needle-bar and the needle. By means of slides having tongues attached to them and extending downward below the reciprocating bar P, and acting in combination with notches on the under side of the said bar, the machine may be stopped by any excessive tension on any of the yarns, and breakage of the yarns be thereby prevented.

Claim.—First, the employment of a pad or pads of India-rubber or other yielding material, applied and operating in combination with the needle-ring or needle bar and needles, substantially as and for either or both the purposes herein specified.

Second, giving the pad M a compound motion, substantially as herein described, whereby it is caused first to press and to hold the work, while the needles are completing their descent into the needle-ring, and afterward to give a second pressure, or draw the loops over the heads or bends of the hooks of the needles during the ascending movement of the latter, substantially as herein described.

Third, the stop motion, composed of slides *l l*, suspended from the yarns, and a notched reciprocating bar P, or its equivalent, applied in combination with an organized knitting machine, to operate substantially as herein specified.

No. 36,200.—W. L. WOOD, of Washington city, D. C., assignor to HARRIET WOOD, of Centreville, Ind.—*Improvement in Paper File.*—Patent dated August 12, 1862.—This invention consists in the construction of a folding box, so arranged that the inside portion will partly slip out and admit of the papers filed therein to be examined by their titles without removing them from the box. To the falling lid is attached a tablet, upon which may be noted the titles of the papers removed.

Claim.—A combination of two boxes, one within the other, and attached, forming a folding box with two lids, and a tablet attached, producing a practical file and safe for business papers, as herein described.

No. 36,201.—N. AUBIN, of Canada.—*Improvement in Water Meters.*—Patent dated August 19, 1862.—Reference to the specification and drawings will be necessary for an explanation of this invention.

Claim.—The combination of a diaphragm with a reversing apparatus and a short slide valve, connected each with the other without the use of stuffing boxes, and the whole enclosed within a proper receptacle containing a valve seat, and constituting a fluid meter, substantially such as is described and acting substantially as specified.

Also, a receptacle constructed in two pieces, one half of which contains part of the side pipe, and the other half the other part thereof, when the joint between the two is made by a diaphragm, and the latter acts on a reversing apparatus contained in one half of the said receptacle; the construction being substantially such as described.

Also, in combination with a diaphragm of a water meter, a short slide valve of less length than the distance from the outside of one port to the inside of the other port, the combination being substantially such as described.

No. 36,202.—C. G. AUSTIN, of Nantucket, Mass.—*Improvement in Coal Sifters.*—Patent dated August 19, 1862.—This invention consists in the arrangement of a hinged flap attached to the cover of the barrel or ash-box, the said cover being made to swing in a direction opposite to that of the flap, and provided with guide grooves in which the sieve moves, in combination with a hopper or chute attached to the side of the ash-box, so that by closing the flap and the lid, the sieve is completely enclosed and the dust prevented from escaping, and by turning the cover, the flap opens and rests with its edge on the hopper or chute so as to pass the sifted coals to a coal scuttle or other receptacle.

Claim.—The arrangement of the flap D hinged to the cover B, as described, in combination with the reciprocating sieve A and hopper E, all constructed and operating substantially as specified.

No. 36,203.—J. F. BLACK and AMBROSE BURACKER, of Lancaster, Ill.—*Improvement in Cattle Pumps.*—Patent dated August 19, 1862.—This invention consists in attaching a tubular piston rod of a pump to a platform which works on a joint at one end, and is provided with a water trough placed within a guard or railing at its free or disengaged end, and covered at its opposite end to prevent animals from standing on the platform in the rear of the portion occupied by the one drinking. The weight of the animal serves to depress the platform, and with it the piston which forces the water up into the trough. As the animal leaves the platform the latter is raised by means of a weight attached to a rope passing over a pulley, the other end of the rope being attached to the free end of the platform.

Claim.—The platform C, with the weight G attached, in combination with the tubular piston rod I of the pump and the trough O, attached to the platform, arranged substantially as and for the purpose herein specified.

Also, the railing M and cover N when combined and arranged relatively with the platform C, for the purpose herein set forth.

No. 36,204.—M. C. BURR, of Owatanna, Minn.—*Improved Clothes Dryer.*—Patent dated August 19, 1862.—This device is formed of a bar of wood placed just below the window, and having attached to its under side a semicircular bar of wood or metal supported by a triangular brace piece. Resting upon the semicircular bar are four arms which turn freely upon pins by which they are secured to a bar E, and are connected at their outer ends by a cord or rope by which the arms are drawn out, and their ends expanded a certain distance apart. Cords or ropes are also attached to the arms for holding the clothes.

Claim.—The straight bars A E, in connexion with the semicircular B, brace D, and the arms F F′ F″ F‴, connected by cords or ropes *j* G, combined and arranged to operate as and for the purpose set forth.

No. 36,205.—W. H. CRAWFORD, of New York, N. Y.—*Improvement in Reflectors.*—Patent dated August 19, 1862.—This reflector consists of a single plate bent so as to form two curved surfaces placed together with a central ridge between them, opposite which latter the flame of the lamp is placed, for the purpose of reflecting the light over a large area.

Claim.—A reflector A, formed of two curved or bent surfaces B C, with one high central ridge D, as and for the purpose shown and described.

No. 36,206.—G. Y. CUSTER, of Norristown, Pa.—*Improvement in Coal-Oil Lamps.*—Patent dated August 19, 1862.—Immediately below the perforated air chamber of a coal-oil lamp is arranged a reservoir containing water so that the heat imparted to the water will generate steam, which latter, mingling with the air, will impinge against the base of the flame; the object being to obtain a clearer light and prevent the objectionable odor common in coal-oil lamps.

Claim.—The reservoir B, containing a supply of water, and arranged immediately below the perforated air chamber G of a coal-oil lamp in respect to the wick tube, as and for the purpose herein set forth.

No. 36,207.—JONATHAN DEARBORN, of Seabrook, N. H.—*Improvement in Door Latches.*—Patent dated August 19, 1862.—This lock is provided with a curved bolt pivoted at its upper end, and so hung that the lower bevelled end which projects from the face of the lock at its lower end, shall be forced out by its own gravity into the locking recess. The spindle is made to work in a slot so as to raise the bolt sufficiently to draw in the bevelled end when the door is to be opened.

Claim.—An improved door-fastener, as made with its bolt case A, its bolt B, its knob shaft *h*, constructed and arranged with respect to each other, and so as to operate substantially in manner as set forth.

No. 36,208.—J. S. DE HAVEN, of Akron, Ohio.—*Improvement in Machines for Loading and Pitching Hay.*—Patent dated August 19, 1862.—This invention consists in an arrangement of devices by means of which the machine as it is drawn over the ground, is made to gather up the hay by the automatic operation of the rake, which throws it, when gathered, into a proper receptacle upon the cart.

Claim.—First, the combination of the fork-handle with the guides H H′, substantially as set forth.

Second, the combination with shaft *e′* and lever * of the screw *m*, sliding shifting piece *m′*, and cam *m″*, for the purpose set forth.

Third, the combination with shaft *e*, of clutch *i*, pulley J″, and shipper K, substantially as and for the purposes set forth.

Fourth, the combination and arrangement of mechanism, substantially as set forth, for automatically gathering and loading hay, substantially as described.

No. 36,209.—J. E. EMERSON, of Trenton, N. J.—*Improvement in Steel Scabbards for Bayonets.*—Patent dated August 19, 1862.—This invention is explained by the claim.

Claim.—As a new article of manufacture, an angular bayonet scabbard, constructed of steel formed around a mandrel by pressing, and united at its edges, in the manner and for the purpose herein specified.

No. 36,210.—SAMUEL ETTER and R. B. NEUMAN, of Fayetteville, Pa.—*Improved Washing Machine.*—Patent dated August 19, 1862.—The rubber is suspended within the tub from a shaft journalled in the upper ends of standards rising from a compound lever. This lever is journalled at its rear end to the projecting ends of two of the legs of the tub and connects the rubber to an oscillating compound lever by means of rods or hooks, whereby the rubber may be easily detached from its actuating lever, and, by a simple movement of the pressure lever, be turned up into such a position as to afford convenient access to every part of the tub, to facilitate the handling of the clothes and the cleansing of the tub and rubber.

Claim.—The compound lever F, standards *d d′*, and pivots *e e′*, in combination with the compound lever H, pivots *g g′*, wrist pins *i i′*, hooks I I′, and rubber C, when arranged to operate in connexion with the washboard, in the manner and for the purpose set forth.

No. 36,211.—C. O. GARRISON, of East Saginaw, Mich.—*Improved Apparatus for the Manufacture of Salt.*—Patent dated August 19, 1862.—This invention consists in the arrangement of false metal bottoms resting on ribs projecting from the regular bottoms of the pans of a salt block in such a manner that a space is formed which can be filled with steam or hot air, and the salt brine passing through the said pans is evaporated entirely by the action of hot air or steam. In combination with the above is an arrangement of a graduation and purifying range consisting of a long flat trough with longitudinal partitions forming a zigzag channel, below which is placed a series of finishing pans, in such a manner that the brine, after being heated in the preliminary pan, is passed through the purifying range where the same presents a large evaporating surface, and consequently readily deposits its impurities before it passes to the finishing pans. A lateral inclination is given to the finishing pans so that the bitterns can be easily drawn off when it is desired to dry the salt on the pans.

Claim.—First, the arrangement of the false metal bottoms *a* inserted into the pans A B C D of a salt block, and resting on ribs *b* projecting from the bottoms *c* of the said pans, substantially as and for the purpose described.

Second, the arrangement of the graduation and purifying range F, in combination with the pans A B C D, constructed and operating substantially as and for the purpose specified.

Third, giving to the finishing pans B C D a lateral inclination, as and for the purpose set forth.

No. 36,212.—C. L. GETZ, of Philadelphia, Pa.—*Pantographic Reversing Instrument.*—Patent dated August 19, 1862.—This device is designed more especially for the use of lithographers and engravers, and consists in an arrangement of lever, links, and wheels, with their connecting bands, in connexion with pencils, in such a manner that drawings, lettering, or any other matter, can be copied reversely from an original directly upon stone; the instrument being further so constructed that the size of the copy may be varied at pleasure from that of the original.

Claim.—The described pantographic reversing instrument, in which the reverse movement of the copying pencil is derived from the action of the leading pencil, by means of the described combination of levers H H′ I I′ K K′, links M and M′, with wheels E E1 E2 E3, and bands *n n*, or their equivalents, the whole being arranged and constructed substantially as set forth.

Also, the employment of levers P and Q, or their equivalents, when combined with the pencils L and O, and operating substantially in the manner and for the purpose specified.

No. 36,213.—W. A. GREENE, of Albany, N. Y.—*Improvement in Sad-Iron Heaters.*—Patent dated August 19, 1862.—This invention consists in arranging, in combination with the fire box and lateral cover doors of the heater, a plate for supporting the irons in a vertical position within the combustion chamber of the heater. The said plate is constructed with horizontal projections, between which are flue openings and flanges. In combination with the support plate is a deflection and lateral support plate, for deflecting the heat downward and laterally between the sides of the iron adjusted for heating, and also to support the toes of the irons laterally.

Claim.—First, when arranged in combination with the fire box A and covers F, the support plate B, constructed substantially in the manner as herein shown and described, and for the purposes set forth.

Also, in combination with the support plate B and covers F, the deflection and lateral support plate C, when constructed and arranged substantially as herein described and shown, and operating for the purposes as fully set forth

No. 36,214.—HENRY HOCKMAN, of Danville, N. Y.—*Improvement in Threshing Machines.*—Patent dated August 19, 1862.—This machine is so constructed as to admit of the attachment of a combined cap and chute F, which conducts the clover seed to the hulling cylinder, and thence to the sieves of the fanning mill, or of a simple chute J, which may be substituted for F, and close the opening of the huller, conducting the wheat directly into the fanning mill; the object being to adapt a threshing and cleaning machine to the purpose of hulling. Immediately below the separator or perforated apron is a stationary table, around which revolves an endless slatted carrier, which latter conveys the grain to either the chute J or clover huller E. A fanning device is arranged below the huller.

Claim.—First, in a combined clover thresher and huller, the use of the detachable alternating chutes F J, substantially in the manner and for the purpose described.

Second, in a combined clover thresher and huller, the use in combination of the detachable alternating chutes F J and the carrier D1, running close in relation with the top and bottom of the table D, substantially in the manner and for the purpose described.

Third, in a combined clover thresher and huller, in combination the use of the detachable chutes F J, the flatwise-arranged carrier DJ, and the fanning device H I, the whole constructed, arranged, and operating in the manner and for the purpose described.

No. 36,215.—NELSON HORNADAY, of West Elkton, Ohio, assignor to Himself and Z. STUBBS, of the same place.—*Improvement in Portable Fences.*—Patent dated August 19, 1862.—This invention will be understood by reference to the claim and engraving.

Claim.—The arrangement of oblique braces B B', secured at their lower ends by pivots C C' to a sill A, and provided at their upper ends with notches D D running longitudinally of the fence, and forming a seat for the contiguous ends of the rails of two adjacent panels to rest in, the whole being combined in such a manner that the downward stress of the panels continually acts to firmly support and clamp the parts together, substantially as described.

No. 36,216.—W. J. HUCKETT, of Marshall, Mich.—*Improvement in Swings.*—Patent dated August 19, 1862.—This invention consists in the employment of two pulleys, one connected with the hanging bars near their upper ends, and the other with a bow projecting from one side of the frame, so that, by means of a cord extending over the said pulleys to the occupant of the swinging car, the latter may be easily vibrated upon pulling the cord.

Claim.—The application and use of the pulley blocks P1 P2 and connecting cord *x*, when arranged and connected relatively with each other and with the frame and swing in the manner and for the purposes specified.

No. 36,217.—D. W. HUNT, of San Francisco, Cal.—*Improvement in Brakes for Wind Wheels.*—Patent dated August 19, 1862.—This invention consists in a method of applying a brake to a wind wheel whereby the speed of the wheel may be regulated as desired without having the brake mechanism interfere with the operation of the wind wheel, either as regards its rotation or its shifting position, which keeps it in the face of the wind. The backs of the fans are provided with longitudinal flanches or ribs projecting centrally from the fans, and serve to stiffen them and to act as regulators to the same to prevent undue velocity in a high wind.

Claim.—First, the strap P applied to the crank pulley G, as shown and connected with the socket K, which is placed loosely in the connecting rod H, the socket being connected to the lever M through the medium of the clamp L, and the lever M connected by a rod *j* with a lever N, which is retained at any desired point by a rack O, or its equivalent, the above parts being used in combination with a revolving crane C and the swivel J, which connects the rods H H, substantially as and for the purpose set forth.

Second, in connexion with the foregoing, the flanches or ribs *f'*, attached to the back parts of the pans F, to operate as and for the purpose specified

No. 36,218.—WILLIAM JOSLIN, of Cleveland, Ohio.—*Improved Clothes-Wringing Machine.*—Patent dated August 19, 1862.—This invention consists in an arrangement of levers

and springs in connexion with caps or boxes for pressing the rubber rollers together. The device is secured to a tub by means of double threaded screws acting within a toothed mortise, by which the end of a spindle is forced against one side of the tub.

Claim.—First, the springs F and F2 acting upon the levers C and C2, as above described.

Second, the right and left hand circular incline planes G and G2, the toothed mortise *a* and *a2*, *b* and *b2*, and the shafts and handles H and H2, the parts being constructed and operated substantially in the manner and for the purpose set forth.

No. 36,219.—RICHARD KITSON, of Lowell, Mass.—*Improvement in Dust Rooms connected with Machines for Picking Cotton, &c.*—Patent dated August 19, 1862.—This invention consists in the employment of flap valves fitted to the mouths of the dust pipes of the pickers, and suspended from pins in such a manner as to close the mouths by gravitation when the pressure of the air in the pipes is no greater than that in the dust room, by which means the back pressure of the air and dust are prevented from returning into the picker room when the machines are stopped.

Claim.—Furnishing the dust pipes of the pickers or openers with valves D D D closing automatically, substantially as herein specified.

No. 36,220.—G. W. LA BAW and P. F. CAMPBELL, of Jersey City, N. J.—*Improvement in Carriage Springs.*—Patent dated August 19, 1862.—This invention consists in the combination of toggle-joint bars, with a sliding bar and compressible spring, the parts being arranged and applied between the axle and the body of the vehicle in such a manner that the toggle-joint bars, through the agency of the said sliding bar, cause the spring to be compressed endwise.

Claim.—The toggle bars *c* and *g* fitted as set forth, in combination with the slide bar *h* and spring *m*, in the manner and for the purposes specified.

No. 36,221.—W. C. LEACH and M. J. KNOX, of Knox Corners, N. Y.—*Improvement in Locks.*—Patent dated August 19, 1862.—This invention consists in the method of arranging a slide or guard for the keyhole of the lock, whereby the outer keyhole, when the lock is locked, will be effectually guarded so that the lock cannot be picked or illegitimately unlocked.

Claim.—First, the slide G, provided with the notch *g* in its upper edge, in combination with the tumbler H, provided with the pin *f*, all arranged so as to be operated by the key of the main bolt D, substantially as and for the purpose set forth.

Second, the pin *e* on the slide G, in combination with the notch *a* in the tumbler E, and the projection *s* on said tumbler, arranged as shown, so as to admit of the latter being operated either by the key of bolt D or the key of the night latch, as set forth.

No. 36,222.—ROBERT LEITCH, of Baltimore, Md.—*Improvement in Two-way Stop-Cocks.*—Patent dated August 19, 1862.—Within the main portion of the stop-cock is fitted a valve provided with a vertical conical opening, and with a slot at its lower part at one side, corresponding with a passage leading from the main pipe or channel, so that a full flow of water may be used solely for the house or for the street separately, or be cut off at the same time from each.

Claim.—A stop-cock for street and dwelling purposes, constructed and operating substantially in the manner and for the purpose set forth.

No. 36,223.—J. L. LEWIS, of Pittsburg, Pa.—*Improvement in Pile or Fagot for Shoe Rail for Gun Carriages.*—Patent dated August 19, 1862.—The pile is formed of a series of flat bars, one of which, A, forms the base of the width of the intended shoe. Upon this is placed edgewise a bar B so as to form with A, in section or endwise, an inverted T. Upon the base bar and at each side of the vertical bar is placed a bar *c c'*, which, with the base bar, form the base of the intended rail. When thus arranged the pile is heated and passed through suitable rollers, and the shoe rail is formed and finished at one operation.

Claim.—The manner herein shown and described of arranging or disposing the bars A B C C' in forming a pile for the purpose set forth.

No. 36,224.—J. W. LYON, of Brooklyn, N. Y.—*Improvement in Locks.*—Patent dated August 19, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—A spring catch or dog, arranged substantially as described, in combination with a latch bolt and releasing mechanism, so as to seize the bolt when drawn back, for the purpose of opening the door, and to retain it within the lock while the door is open, and until released in the act of shutting the door by the action of the door jamb against the releasing mechanism, substantially as hereinbefore set forth.

No. 36,225.—ISAAC MARSH, Jr., of Milton, and GRIGGS MARSH, of Lewisburg, Pa.—*Improvement in Tile Roofing.*—Patent dated August 19, 1862.—This roofing is formed of burnt earthware tile provided with grooves around its edges, into which are inserted strips of tin, zinc, or other metal covered with muslin or other soft material in connexion with cement.

Claim.—The grooved tiles and thin strips of metal or other elastic material, made and joined together so as to construct a water-proof and fire-proof roof, in the manner and for the purpose herein fully set forth.

No. 36,226.—SAMUEL MARSHALL, of Wilmington, Del.—*Improvement in Lamps.*—Patent dated August 19, 1862.—The object of this invention is to adapt an ordinary fluid lamp to the burning of coal oil without a chimney, and it consists in the employment of a supplemental cap D of semi-spherical form and slotted at its upper end so as to fit over the wick tube, and connected to the wick tube by a curved metal plate resting upon the cap of the lamp. By bending the plate the supplemental cap may be raised or lowered to suit the height of the wick tube.

Claim.—The attaching of the supplemental cap D to the lamp by means of one or more curved or bent plates E, arranged as shown, so as to support the cap D and admit of its being adjusted higher or lower, to suit the height of the wick tube, and at the same time admit of the wick tube passing through it at its upper part, to prevent any lateral movement or shifting of the cap, as and for the purpose herein set forth.

No. 36,227.—M. J. MARTIN, of Belleville, Ill.—*Improvement in Stump Extractors.*—Patent dated August 19, 1862.—This invention consists of a frame provided with diagonal braces, that admit of being readily removed for convenience of access to the stump, and of a screw provided at its lower end with grappling hooks. The upper part of the screw works in a nut, to which are attached curved arms, by which means the screws and grappling hooks are elevated, and the stump extracted.

Claim.—The combination of the frame with shifting braces *r*, the screw with grappling hooks *h*, and the nut with bent power levers *c*, arranged in the manner described and for the purpose specified.

No. 36,228.—BENJAMIN MERRITT, jr., of Chelsea, Mass.—*Improved Machine for Pebbling or Embossing Leather.*—Patent dated August 19, 1862.—This invention consists in the employment of an engraved or indented metallic roll C resting upon a vulcanized rubber roll B, having its bearings in boxes upon springs secured in each housing. Upon the metallic roll also rests a roll E similar to B, its boxes sliding in a slot in the housings. To each box of the engraved roll is attached a frame, and on each side of the rolls is a table so arranged that skins may be fed between the rolls above the engraved roll at the same time. A rest or guide bar *k* above the lower table receives the skin as it comes from the upper table on the opposite side of the rolls.

Claim.—The above-described machine for pebbling or figuring leather, consisting of the indented or engraved roll C, with the elastic rolls B and E above and below it, with their bearings or boxes *d f g* sliding and supported in the housings A, in the manner specified.

Second, suspending the tables F and G and rest *k* on the boxes *f* of the roll C, so that they shall maintain their proper positions with respect to the roll, as it rises or falls.

No. 36,229.—PURCHES MILES, of New Haven, Conn.—*Improved Meat-mincing Machine.*—Patent dated August 19, 1862.—Within recesses upon the inner side of the cylinders are plates containing cutters, with which they are united by being cast together. The ends of these cutters rest in a groove turned in the arbor, upon which are cast spiral beaters, so that the cutters are held firmly in place while the arbor revolves.

Claim.—The cutters D united solidly with a metal plate C by being cast thereon, in combination with the grooves *d*, in the manner and for the purpose substantially as set forth.

No. 36,230.—WILLIAM MOLLER, of New York, N. Y.—*Improved Oven for Re-burning Bone-Black.*—Patent dated August 19, 1862.—Upon the inside of an inclined circular retort are arranged a series of circular and longitudinal ribs or flanches, so as to divide the surface into compartments, for the purpose of preventing the bone-black from sliding over the surface when the retort is rotated, by which means the bone-black will be turned over, and every particle be brought in contact with the surface acted upon by the heat of the fire.

Claim.—The arrangement of circular and longitudinal ribs or flanches on the inside surface of a revolving retort, dividing the said surface in compartments, in the manner and for the purpose substantially as specified.

No. 36,231.—ABRAM PAIGE, of Springfield, Mass.—*Improvement in Electrical Instruments for Medical Purposes.*—Patent dated August 19, 1862.—The apparatus in which the medicated liquid is placed consists of a vessel of glass, or other non-conducting material, made in a tapering and curved form, terminating at one end in an open neck. At the opposite extremity is a foot or disk, through the centre of which is a small conduit leading from the inner chamber. Leading from the conduit is a lateral or branch passage, into which and the conduit, and so as to reach, or nearly so, to the outer end of the conduit, extends a metallic wire wound helically, and made to terminate in a socket, or other suitable means of connecting it to the wire of an electrical battery. In operation, the foot or disk end is placed upon the diseased part of the body, and a current of electricity being made to pass through the wire, causes the medicating liquid to enter and penetrate the diseased part.

Claim.—For the application of medicaments for curative purposes by electrical agency, the instrument or apparatus substantially as hereinbefore described and represented.

No. 36,232.—J. G. PERRY, of South Kingston, R. I.—*Improved Sausage Filler.*—Patent dated August 19, 1862.—This machine consists of a hollow case divided at its centre, to form two parts, which are hinged together and provided with a hopper and discharging spout. Through its centre passes a shaft, upon which are secured two or more leaves, whose peripheries are in contact with the inner surface of the case, and so arranged that, as they are rotated, one of the leaves will force the meat through the discharge passage, while the other prevents it from being carried back.

Claim.—The combination of the leaves (two or more) with the case, substantially as herein described and for the purpose set forth.

No. 36,233.—J. G. PERRY, of South Kingston, R. I.—*Improved Sausage Filler.*—Patent dated August 19, 1862.—In a hollow case, divided centrally in two parts, is fitted a shaft provided with two leaves, one of which is secured to the shaft so as to turn with it. Upon the shaft are also placed two disks having each two slots for holding the leaves. These disks are arranged in the case in such a manner as to bring their lower surfaces together, their upper edges being separated so that, as the shaft is revolved with the leaves, the disks will force the meat into the discharge passage.

Claim.—The combination of the disks with the leaf or leaves and shaft, substantially as herein described and for the purposes set forth.

No. 36,234.—DAVID and JOHN POLLOCK, of Cleveland, Ohio.—*Improvement in Artificial Teeth.*—Patent dated August 19, 1862.—This invention is explained by the claim.

Claim.—First, the use of metallic strips or wires, composed of platina or other suitable metal, to be used longitudinally, transversely, or crossing each other like network, inserted or moulded in the plate, gums, and base of artificial teeth, composed of porcelain or other substance, substantially as set forth in this specification, and as will best answer the purpose intended.

Second, the use of metallic strips or wires, composed of platina or other metal, to be used in sectional parts of artificial teeth, and also in the teeth, substantially as set forth and for the purpose intended.

No. 36,235.—M. W. POND, of Elyria, Ohio.—*Improved Harness Buckle.*—Patent dated August 19, 1862.—This invention consists in the combination of an eccentric clamp, with a straight tongue and two bars, between which and the clamp the strap passes so as to distribute the pressure, and firmly hold the strap or brace without injuring or deadening it at any point.

Claim.—As a new article of manufacture, a buckle having its outside frame thrown out, Figs. 1 1, with three cross-bars and an eccentric clamp 3, hinged and arranged as herein described.

No. 36,236.—J. P. SCHENKL, of Boston, Mass.—*Improvement in Concussion Fuze for Explosive Shells.*—Patent dated August 19, 1862.—Within a cylindrical case is secured by a screw a slider or plunger B, provided with a loading chamber for the reception of a charge of powder, and through the breech of the loading chamber is a vent opening out of a percussion nipple within another chamber *f*, formed in the striker and around the nipple, which latter receives a percussion cap. To the outside surface of the percussion cap is fitted an annulus of leather, for the purpose of holding the cap on the nipple during transportation of the fuze. The rear end of the outer case is formed with a counter-sunk cylindrical passage, to receive the stem of a leaden or inelastic abutment, which rests against the inner surface of the breech. This abutment is bored through longitudinally and receives a plug, which, when the apparatus is fixed in a shell, serves to separate the powder charge of the shell from the chamber at the rear end of the case.

Claim.—First, the arrangement and combination of the holding annulus *h'*, and the percussion-cap chamber *f*, with the plunger B, and its nipple *e*.

Second, the construction of the inelastic abutment, in such manner as to extend through the metallic bottom or breech of the case A, and project over opposite sides or surfaces thereof, substantially as explained.

Third, the formation of the inelastic abutment with a plug hole or passage for receiving a plug, to operate in manner and for the purpose substantially as set forth.

No. 36,237.—J. W. SCHREIBER, of New York, N. Y.—*Improvement in Mica Chimneys for Lamps.*—Patent dated August 19, 1862.—This invention consists in constructing a lamp chimney of mica of a double taper or conical form, provided with a metal top, and also with a perforated metal base. Above the metal top of the chimney is a bell-shaped cap provided with an upright metal tube attached centrally to it, the upper end of which communicates with horizontal tubes provided with elbows extending downwards so as to increase and allow the escape of the draught, for the purpose of enabling coal-oil lamps to be used in cars and other vehicles.

Claim.—First, a lamp chimney composed of two conical mica tubes *a a'*, connected together at their larger ends, and provided with a metal-top tube *c* and a perforated metallic base C, substantially as set forth.

Second, the supplemental draught tubes F H H, with cap E, attached and arranged as shown, to form two eduction or escape passages for the draught, when said tubes are used in connexion with the chimney B, for the purpose set forth.

No. 36,238.—THOMAS SHAW, of Philadelphia, Pa.—*Improvement in Blow-off Cocks for Pumps.*—Patent dated August 19, 1862.—This invention consists in the application of a valve to the ordinary blow-off cock, so that air, water, &c., after being forced out, are prevented from returning.

Claim.—The combination of a valve and faucet, when applied to a pump, substantially as shown and described.

No. 36,239.—W. B. SHEDD, of East Boston, Mass.—*Improved Hat Brush.*—Patent dated August 19, 1862.—This invention consists in providing a hat brush with a spring clasp suitably arranged on its back and near one end so that it can be attached to the sweat or head lining of the hat, for the purpose of conveniently carrying the same.

Claim.—Furnishing the brush with a spring clasp, applied and arranged upon its back, to operate substantially as and for the purpose herein specified.

No. 36,240.—W. W. SIMRELL, of Great Bend, Pa.—*Improvement in Auger Handles.*—Patent dated August 19, 1862.—This invention consists in providing the handle with a cavity in which is arranged a nut or collar in connexion with upper and lower plates, a brace and spring, arranged in such a manner as to readily adapt it to be used with ordinary augers of various sizes.

Claim.—The arrangement and combination of the collar or nut B, brace D, spring P, thumb-screw T, shank C, plates L L', and handle H, as and for the purpose set forth.

No. 36,241.—J. P. SINCLAIR, of Little Prairie Ronde, Mich.—*Improvement in Car Coupling.*—Patent dated August 19, 1862.—This invention consists in the employment of two concave clasps pivoted to springs and fitted in the draw-head or bumper of a car, in connexion with a vertical sliding pin, all so arranged as to be self-connecting when two cars come in contact with each other.

Claim.—The concave clasps C connected by pivots or joints *a* to springs B B, attached to the draw-heads or bumpers A in connexion with the pins F and shackle D, all arranged as and for the purpose herein shown and described.

No. 36,242.—BENJAMIN SNYDER, of Trenton, N. J.—*Reading Card.*—Patent dated August 19, 1862.—This device is formed of a jointed or folding card, or thin wooden or metal plates, the lower one of which is provided with a flap to prevent the card from casually slipping upon the paper when in use; the object being to provide a guide for the eye so as to facilitate reading in railroad cars.

Claim.—A reading card formed of two parts *a b* connected by a joint *c*, and provided with a flap B, substantially as set forth.

No. 36,243.—EDWARD SPENCER, of St. Louis, Mo.—*Improvement in Marking Machines.*—Patent dated August 19, 1862.—This device consists of a pair of jaws provided with handles and operated like pincers. In one of the jaws is fitted a die for the reception of types, and under the die is a piece of India-rubber serving as a yielding bottom. On each side of the die is fixed a roller provided with a spring clasp for the purpose of holding and securing a ribbon which passes over the rollers; the ribbon is saturated with ink, and kept against the face of the die by means of friction rollers. The opposite jaw is provided with a punch and perforator, which latter perforates the ticket so as to admit of its being easily torn apart.

Claim.—First, in combination with the jaws A A' the die N, substantially in the manner described, for the purpose specified.

Second, in combination with the jaws A' A and die N, the yielding bottom *r* under the die, as shown and described.

Third, in combination with the jaws A' A, rollers H H, and friction wheels *d d*, the India-rubber friction pieces L L, as shown and described.

Fourth, in combination with the jaws A' A the perforator C, as shown and described, for the purpose specified.

Fifth, in combination with the jaws A' A and perforator C the punch B, as shown and described.

Sixth, in combination with the jaws A' A and die N the punch B, as shown and described, for the purpose specified.

Seventh, in combination with the jaws A' A the perforator C, the die N, and the rollers H H, as described.

No. 36,244.—E. T. STARR, of New York, N. Y.—*Improvement in Skates.*—Patent dated August 19, 1862.—The back part of the runner is pivoted to the heel post, and its front end

is secured to the front post of the foot-stand by means of a set-screw passing through the post and through an oblong slot in the runner, so that the front part of the runner may be raised or lowered as desired, to adjust it to boot heels of different heights.

Claim.—Having the foot-stand A made adjustable in respect to the runner B, substantially in the manner herein shown and described, so that the skate may be adjusted to boot heels of different heights, and the runner be thus readily made to occupy a horizontal position in respect to the bottom of the wearer's foot, all as set forth.

No. 36,245.—C. E. STELLER, of Genesee, Wis.—*Improvement in Sod Cutters.*—Patent dated August 19, 1862.—This invention consists in the arrangement of two or more vertically adjustable cutter-beams, each being provided with a series of oblique cutters inclining laterally in opposite directions, in combination with a self-adjusting drag suspended from the rear end of the cutter-frame in such a manner that the sod is cut up by the action of the cutters, and the ground is pulverized and levelled by the action of the drag, for the reception of seed. On the upper ends of the cutters are arranged notches combined with pivoted catches or buttons, in such a manner that, by turning the buttons, the cutters can be secured or detached at pleasure.

Claim.—First, the arrangement of two or more vertically-adjustable cutter-beams A B, each being provided with a series of oblique cutters C C', inclined laterally in opposite directions, in combination with the self-adjusting drag G, constructed and operating as and for the purpose shown and described.

Second, the arrangement of the notches *i* in the top end of the cutters C C' in combination with the buttons *j*, as and for the purpose specified.

No. 36,246.—J. THOMPSON and D. D. DALRYMPLE, of Cross Roads, Ohio.—*Improved Sawing Machine.*—Patent dated August 19, 1862.—This invention consists in the arrangement of a horizontally sliding slotted frame or gate to which the saw is attached by a pivot, and which receives a reciprocating motion by means of an eccentric wrist-pin projecting from the face of a rotary disk, or other convenient means, in combination with a vertically sliding guide-frame, which serves to raise or lower the saw, and the weight of which assists in pressing the saw down upon the wood and facilitating the operation of cutting.

Claim.—The combination of the frame J, rollers *l l*, and clamp L, with the pivoted saw I, bow *h*, shank *d*, rollers *c c*, gate H, disk G, and wheel F, the whole operating together in the manner herein shown and described.

No. 36,247.—STILLMAN THORP, of Turner, Maine.—*Improvement in Car Coupling.*—Patent dated August 19, 1862.—This invention consists in the employment of a chambered box or tube which holds the link, and which is made to slide into and out of the mouth of the spring draw bar at pleasure, and so arranged that the link is supported and guided into the mouth or opening of the opposite buffer whenever the cars are brought into contact with each other.

Claim.—The chambered sliding box or tube D, attached to buffer C, applied to and operating in connexion with draw-bar B, linked *m* and coupling pin *i*, substantially as set forth, for the purpose specified.

No. 36,248.—S. E. TOMPKINS, of Newark, N. J.—*Improvement in Hooks and Terrets for Harness Saddles.*—Patent dated August 19, 1862.—This invention relates to the construction of saddle hooks and terrets such as are covered with leather and provided with a metal lining to prevent the wearing of the leather under the friction of the reins and strap. The metal frame or body of the hook and terret are made in two parts, arranged in such a manner as to form a clamp to hold the leather covering which encloses the exterior part of the frame only while the inner part is made to serve the purpose of a metal lining.

Claim.—First, having the frame or body A of the hook or terret formed of two parts *a b*, connected by screws or rivets, substantially as set forth.

Second, the leather covering B, inserted between the two parts *a b* of the frame or body A, and fitted around the part *b*, with the rivets or screws passing through it, substantially as and for the purpose set forth.

Third, the combination of the frame or body A, formed of two parts *a b*, connected together as shown with the leather covering B, when the parts are so arranged that the inner part *a* of the frame or body will form the metal lining of the hook or terret, and also the tip of the hook, all in one piece, without a joint, while the part *b* serves as the body for the leather covering, as set forth.

No. 36,249.—WILLIAM TUNSTILL, of Paterson, N. J.—*Improvement in Braiding Machines.*—Patent dated August 19, 1862.—Upon the vertical shaft *c* which gives motion to the parts of the braiding machine is a mitre wheel *f*, set so as to slide vertically on a feather or seat in the said shaft. Passing the shaft *e* by means of an eye is a lever *g* acting below the wheel *f* so as to hold it up in gear with a mitred gear revolving on a horizontal stud in the main frame; when the lever *g* drops, the mitre gear wheel *f* falls and becomes disconnected from wheel *d* and the machine stops. Over a horizontal stop motion lever *k* is a catch bar *h*, which, when

on the lever *k*, holds up the aforesaid lever *g*, but when the said stop lever is moved aside by the weight that falls, a thread breaks and the catch bar *h* drops and thus stops the machine.

Claim.—The arrangement of the lever *g*, catch bar *h*, and stop motion lever *k*, in combination with the mitre gears *d* and *f*, as and for the purposes set forth.

No. 36,250.—W. H. WALDBY, of Cooperstown, N. Y.—*Improvement in Grain-Cleaning Machines.*—Patent dated August 19, 1862.—This machine consists of a revolving frustum of a cone fitted within a corresponding shaped screen and provided with teeth or scourers, beaters and brushes, and used in connexion with a blast fan and discharge spouts leading from the bottom of the screen.

Claim.—The screen D and the frustum of a cone C provided with the beaters or wings *a a*, brushes *b b*, and teeth or pins *c*, in combination with the fan G and spouts E F, all arranged as and for the purpose herein set forth.

No. 36,251.—J. B. WATKINS, of New Bedford, Mass.—*Improvement in Awnings.*—Patent dated August 19, 1862.—The outer end of the awning is attached to a sliding board which rests on an inclined frame projecting from the building, the awning being connected to the frame by rings, and having cords attached and arranged in such a manner as to enable it to be easily and quickly drawn out or in, and also admit of better ventilation when drawn up so as to render it less liable to mildew and decay.

Claim.—Attaching the awning D to the framing A by means of the rings *c*, when said rings are used in connexion with the stationary board or strip C and the sliding board or strip E to which the awning is attached, and cords or ropes *d e* connected to the board or strip E, all arranged as and for the purpose herein set forth.

No. 36,252.—WILLIAM WEBSTER, of Morrisania, N. Y.—*Improved Fire-Damper Regulator.*—Patent dated August 19, 1862.—This apparatus consists of a metallic cylinder, in which is a piston of smaller diameter than the inner surface of the cylinder, the space between the cylinder and piston being filled with India-rubber as a packing and serving as an elastic resistance to the motion of the piston, which latter gives motion to the lever that operates the damper in checking the draught in the chimney.

Claim.—The combination and arrangement of the cylinder A A B B, the piston C C, and packing D D D D, substantially as shown and described.

No. 36,253.—A. H. YOUNG, of Boston, Mass.—*Improvement in Band and Skirt-Hoop Attachments.*—Patent dated August 19, 1862.—This invention consists in a method of affixing the extremity of the skirt-hoop to a band extending down from the waistband of a lady's hoop-skirt, the said band with the metallic connexions of the hoop being subsequently covered with leather or other suitable material.

Claim.—Improved band and skirt-hoop attachment, consisting of the metallic clasp B and the projection *a*, constructed, arranged together, and applied to the band and skirt-hoop, substantially as described.

No. 36,254.—J. H. BASSETT, of Salem, Mass., assignor to THE AMERICAN STEAM-GAS COMPANY.—*Improvement in the Manufacture of Illuminating Gas.*—Patent dated August 19, 1862.—This invention is designed as an improvement in the manufacture of hydro-carbon gas, for which a patent was granted to the said Bassett on January 3, 1860, and it consists in passing superheated steam into a retort containing bituminous coal partly incandescent and partly in a bituminous state; the incandescent part serving to decompose the steam as it comes in contact with it, and the bituminous part, which is only heated but not incandescent, furnishing to the hydrogen gas from the decomposed steam the carbon necessary to render it illuminating, or the balance which may be necessary, and which has not been obtained from the incandescent coal.

Claim.—Passing superheated steam into a retort containing carbonaceous material partly in an incandescent and partly in a bituminous state, substantially as set forth.

No. 36,255.—S. B. EVERITT, of Plymouth Hollow, Conn., assignor to THE THOMAS MANUFACTURING COMPANY.—*Improvement in Knife Handles.*—Patent dated August 19, 1862.—The nature of this invention is explained by the claim.

Claim.—The construction of the handle of a pocket knife of two shells A A stamped or punched out of sheet metal or alloy, and having the ends of their concave interiors filled with fusible metal or alloy, as shown at *a a*, and herein described, or with an equivalent filling of hard metal.

No. 36,256.—J. S. MCCURDY, of Brooklyn, N. Y., assignor to WHEELER & WILSON MANUFACTURING COMPANY, of New York, N. Y.—*Improvement in Sewing Machines.*—Patent dated August 19, 1862.—This invention consists in the combination of a reciprocating eye-pointed needle for carrying one thread, with a rotating hook-pointed shuttle for extending the loop of needle thread and passing over the bobbin of a second thread by means of multiple gearing in such a manner that the shuttle is caused to revolve two or more times faster

than the crank-pin for operating the needle, so that the loop of needle thread carried round the body of the bobbin shall be extended to its greatest dimensions and freed before the needle rises to its highest point and in time to permit the stitch to be drawn tight during the ascent of the needle, notwithstanding the rotation of the shuttle, with uniform speed, the revolution of the shuttle being thus a multiple of that of the needle of the crank-pin. With the rotating shuttle is combined a thread guard to prevent the loop of needle thread thrown out by the rise of the needle from being misplaced before the point of the shuttle enters it.

Claim.—First, the combination of a reciprocating eye-pointed needle for carrying one thread with a rotating hook-pointed shuttle, by means of multiple gearing, operating in such a manner that the shuttle rotates two or more times as fast as the crank-pin, or its equivalent, for imparting the reciprocating movement to the needle, substantially as set forth.

Second, the combination of a spool bobbin with a rotating shuttle by means of a central spindle, substantially as set forth.

Third, the combination of a rotating shuttle with a thread tenison for the shuttle thread that remains stationary within the shuttle, substantially as set forth.

Fourth, the combination of a rotating shuttle with a thread guard for the needle thread, substantially as set forth.

Fifth, the combination of a reciprocating eye-pointed needle and rotating shuttle with a positive thread take-up, operated by a rock shaft of the needle mechanism, substantially as set forth.

Sixth, the combination of the members for operating the needle with the rotating shaft of a sewing machine through the intervention of a crank, in connexion with the combination of the spindle for operating the rotating shuttle with the same rotating shaft through the intervention of gearing, substantially as set forth.

Seventh, the combination of the rotating shuttle with the spindle that operates it, in such a manner that the shuttle is located over the head of the spindle and driven by a driver secured to said spindle, substantially as set forth.

No. 36,257.—DAN READ, of Boston, Mass., assignor to A. A. TAYLOR, of the same place.—*Improvement in Covering Spinning Rolls.*—Patent dated August 19, 1862.—This invention consists of a central shaft with its bearings and two annular flanges in the form of a spool, made of iron. India-rubber in a semi-fluid state is spread upon a strip of cotton or linen cloth which is wound around the central shaft in the space between the flanges, until it rises above the circumference of the same, when the India-rubber is vulcanized in the usual manner.

Claim.—The combination of a spinning roll by the combination, in solid form, of India-rubber with iron or other metal, and in said solid form vulcanized in the part composed of said India-rubber, as herein described.

Also, the obtaining, by the aforesaid means, the harder and compact outer surface combined with an inner elasticity possessing the advantages aforesaid, and such other rolls as are substantially of the same construction, claiming to produce the same improvements.

No. 36,258.—J. H. & A. E. REDSTONE, of Indianapolis, Ind., assignors to Themselves and J. M. RAY, of the same place.—*Improvement in Harvesters.*—Patent dated August 19, 1862.—Reference to the specification and drawings will be necessary for a description of this invention.

Claim.—First, the device B when operated in connexion with the master-wheel A and frame, substantially in the manner and for the purposes set forth.

Second, operating the sickles of a reaper by means of inclined slots in plates or ears attached to the bar and operated upon by a connexion rod, substantially as set forth.

Third, operating the rake F by means of a crank placed over the main axle, and operated between the master-wheel and the frame of the machine, substantially as described.

Fourth, the revolving band table, in connexion with the arms K, when operated substantially as set forth.

Fifth, the band-twister V', when constructed and operated substantially as set forth.

No. 36,259.—R. A. STRATTON, of Philadelphia, Pa., assignor to G. W. CARR & CO., of the same place.—*Improvement in Apparatus for Hardening Strips of Steel.*—Patent dated August 19, 1862.—The nature and object of this invention are explained by the claim.

Claim.—First, hardening strips of steel or steel wire by passing them at a uniform speed, and in a red-hot state, vertically through an opening in a trough containing water or other suitable fluids, when a constant stream of the latter is allowed to pass through the said opening in contact with and so as to surround the wire, as herein set forth.

Second, heating the said strips of steel or steel wire by passing them vertically through guides, and in contact with or adjacent to a series of flames, as herein described.

No. 36,260.—R. A. STRATTON, of Philadelphia, Pa., assignor to G. W. CARR & CO., of the same place.—*Improvement in Joints for Ribs of Umbrellas and Parasols.*—Patent dated August 19, 1862.—This invention consists in casting a block of metal directly upon the rib of an umbrella at the point of connexion with the forked end of the stretcher, a slight indentation being made in the wire so that the block will retain its position upon the rib.

Claim.—As a new manufacture, the block D cast to the rib A, and arranged for connexion to the stretcher B, as and for the purpose herein set forth.

No. 36,261.—R. A. STRATTON, of Philadelphia, Pa., assignor to G. W. CARR & Co., of the same place.—*Improvement in Tips for Umbrellas and Parasols.*—Patent dated August 19, 1862.—This invention consists in casting metal tips upon the steel ribs of umbrellas and parasols in order to obviate the use of sharp exposed ends.

Claim.—As a new manufacture, metal tips cast on to the steel ribs of umbrellas and parasols, as and for the purpose herein set forth.

No. 36,262.—EMIL TRITTIN, of Philadelphia, Pa., assignor to DAVID RICE, of New York, N. Y.—*Improvement in Lamp Burners.*—Patent dated August 19, 1862.—This invention consists in forming the wick tube of the burner of two parts connected together in such a manner that the upper part will be insulated from the lower part, and the wick tube thereby be prevented from conducting heat down to the fountain or reservoir of the lamp, so as to prevent an undue evaporation or volatilization of vapor. The cone and jacket are fitted to the burner in such a manner as to insulate the former from the latter, in order to prevent the heat from being conducted below to the fountain.

Claim.—First, constructing the wick tube of two parts B E connected together by the plate D and points *e* of the lower part A of the burner with a space *g* between them, substantially as and for the purpose herein set forth.

Second, in combination with the wick tube thus constructed the jacket G supported on the burner by the points *d* of the plate D, as and for the purpose specified.

No. 36,263.—TURNER WILLIAMS, of Providence, R. I., assignor to Himself and DAVID HEATON, 2d, of the same place.—*Improvement in Cranks for Driving Sewing Machines and other Machinery.*—Patent dated August 19, 1862.—This invention has special reference to an improvement in cranks for driving sewing machines, &c., described in the patent granted to the said Williams on November 12, 1861, and it consists in a construction and arrangement of friction pawls with the two auxiliary pins and a crank pin for the purpose of connecting and disconnecting the former and latter alternately at the proper time. The said friction pawls are maintained in their proper position to insure immediate action by means of a spring connexion which causes each of the pawls to bind only when its eccentric arm moves in one given direction. The connecting rod which connects the crank with the treadle or other source of motion for attaching the said rod to the auxiliary pins is so constructed as to operate the two friction pawls in the act of turning the crank by means of the treadle, each movement of the latter producing the binding action of the pawl connecting the advance pin with the crank pin, thus assisting the latter to pass the "dead centre." Secured to the connecting rod is a flat spring which serves to take up any lost motion and enables the parts to act instantly with each impulse of the treadle so as to insure the immediate action of the pawls.

Claim.—First, the construction and arrangement of the friction pawls L M substantially as herein shown and described for the purpose specified.

Second, the use of a spring connexion *k*, or an equivalent yielding force, arranged and operating substantially as described for the purpose specified

Third, the peculiar construction of the connecting rod *l*, substantially as herein shown and described.

Fourth, the spring N, in combination with the connecting rod *l*, substantially as described for the purpose specified.

No. 36,264.—H. S. FISHER, of Newburg, Pa.—*Improvement in Preserve Cans.*—Patent dated August 19, 1862.—This can is formed with an orifice at its top, having its edges turned up to receive a fillet of paper properly saturated. Over this orifice and fillet is arranged a cap formed of a plate of tin pressed out at its centre so as to fit over the projecting edges of the orifice. The cap is pressed down by means of a clamp or bar held in position by a loop and hoop at either end.

Claim.—First, the can cap H, constructed with the plane portion *d* and bulge portion *i*, in connexion with the can top having a central orifice through it, all substantially in the manner and for the purpose described.

Second, the combination of the cap H, constructed as described, can top and clamp K, substantially in the manner and for the purpose described.

Third, the cap H in combination with the orifice elevation *c* and fillet *g*, in the manner and for the purpose substantially as described.

No. 36,265.—WALTER AITKEN, of Newark, Ill.—*Improved Current Water Wheel.*—Patent dated August 26, 1862.—This invention consists in so constructing a current water wheel as to admit of its being readily raised and lowered to adapt it to the rise and fall of the stream, the velocity and power of the wheel being controlled by allowing the floats to dip in the water or be submerged entirely therein.

Claim.—The arrangement of the horizontal power wheel A, the floats *a*, and the braces *b*, as connected with A, in the manner described.

Second, the combination and arrangement of the vertical axis J, the wheel and axle B *c*.

the ratchet *d*, the cogged semicircle B, or its mechanical equivalent, for imparting motion to B, with the chain or its equivalent *e*, for the purpose of elevating the wheel A, all constructed and operating substantially as and for the purposes delineated and set forth.

No. 36,266.—ALBERT ALBERTSON, of New York, N. Y.—*Improvement in Bottle Stoppers.*—Patent dated August 26, 1862.—This device consists of a small metallic standard upon the lower end of which is secured a button of a size sufficient to allow it to pass through the neck of the bottle. Upon this button and secured by a disk is a piece of rubber or other elastic material of a larger diameter than the button. At the upper end of the standard is secured a coiled spring so arranged as to keep the rubber stopper in close contact with the inside of the neck of the bottle.

Claim.—The application and use of a self-closing stopper for bottles, &c., constructed and operating substantially as described, so as to produce a perfectly tight stopper and which will preserve any liquid or substance from evaporization or injury.

No. 36,267.—R. W. BENDER, of Chicago, Ill.—*Improvement in Apparatus for Evaporating by Means of Steam.*—Patent dated August 26, 1862.—This invention consists in connecting the waste pipe through which the spent steam escapes, either by the intervention of a receiver or without it, to the boiler, in such a manner that, by means of a double-acting pump, the cooled or condensed steam and water may be forced back into the boiler, by which means a supply of steam for heating or boiling of a higher and more uniform temperature is obtained and at a diminished expense of fuel.

Claim.—The application, combination, and arrangement of the receiver A, the pipes E and F, and the double-acting pump P, operating as described for the purposes substantially set forth.

No. 36,268.—E. L. BERGSTRESSER, of Berrysburg, Pa.—*Improvement in Horse-rakes.*—Patent dated August 26, 1862.—The teeth in this machine rest in loops attached to the under side of a cross-bar, the ends of which are fitted in slots formed in projecting side pieces of the platform at the rear of the axles. This cross-piece is connected to a cylindrical shaft in front of it by means of two jointed rods. By moving a lever attached to this shaft the teeth are readily raised or lowered at the will of the operator.

Claim.—The construction and arrangement of the slotted sides H H, in combination with the vibrating cross-bar K and connecting rods N, as arranged with the roller Q, for the purpose of raising the teeth with greater regularity and facility, as herein described.

No. 36,269.—A. G. BINNS, of Goshen Township, Ohio.—*Improvement in Churns.*—Patent dated August 26, 1862.—To the upper end of the dasher shaft is secured a horizontal toothed wheel into which meshes a straight rack. To the ends of this rack are attached wooden springs secured at their upper ends to the upper cross-bar of the frame. As the rack is vibrated a rotary motion is imparted to the dasher.

Claim.—The arrangement and combination of the springs G, rack K, and wheel I, arranged and combined as herein described and for the purposes set forth.

No. 36,270.—G. W. BLAKE, of New York, N. Y.—*Improved Self-Regulating Apparatus for Feeding Steam Boilers.*—Patent dated August 26, 1862.—This apparatus is composed of a closed vessel, arranged at a suitable distance above the intended level of the water in the boiler, and connected by two separate pipes with the boiler, and by a third pipe with an elevated reservoir, from which it may be filled by gravitation. Combined with the above is a system of valves and an arrangement of levers, weights, an expanding chamber and a float, whereby, whenever the water in the boiler gets below a certain desired level, the said vessel is caused, without manipulation, to empty itself into the boiler and be refilled from the reservoir or head, the process being repeated until the water has risen again to the desired level, when the operation ceases.

Claim.—First, the expanding chamber I J K L, loaded lever M, float R, rock shaft Q, tappet *s*, lever P, rod E, weight G, catch H, and hook *p*, or their equivalents, the whole arranged and applied in combination with each other and the valve spindles *c d*, and with the vessel A, to operate substantially as herein specified.

Second, the arrangement of the steam and water pipes C and D, and their valves and valve spindles *c d*, in such manner that the two valve spindles will occupy the same horizontal line, and thereby provide for the two valves being operated simultaneously by a weight acting vertically, substantially as and for the purpose herein described.

No. 36,271.—SUMMER BLODGETT, of Glover, Vt.—*Improved Wringing Machine.*—Patent dated August 26, 1862.—This machine is provided with two rollers, one of which is elastic and the other inelastic, the latter being supported by means of endless suspension bands and their pulleys in combination with springs. The rollers are attached to a frame having its standards secured to a platform upon which the tub is placed when in use.

The pressure of the rollers upon each other is regulated by means of an adjusting screw working upon a rod passing through a rubber spring, and attached at its lower end to an endless band which passes over pulleys and over the extended shaft of the inelastic rubber.

Claim.—The improved cloth squeezing machine as constructed with one elastic and one inelastic roller, and with the latter suspended in endless bearing bands supported by pulleys, as specified.

Also, the combination and arrangement of the tub platform B with the roller frame A, and its rollers C D, as specified.

Also, supporting the lower or wooden roller by means of the endless suspension bands and their pulleys, in combination with springs, the whole being arranged and applied to the said roller and its frame, substantially in manner and so as to operate as specified.

Also, the arrangement of the adjusting screws and their washers with the springs, forks, endless bands and pulleys, as applied to the lower of the rollers, as set forth.

No. 36,272.—ADELINE J. BROOKS, of Philadelphia, Pa.—*Improvement in Corsets.*—Patent dated August 26, 1862.—The upper part of the corsets is formed of curved pieces of whalebone, below which are straight pieces of whalebone without any intermediate belt, and between these straight pieces are inserted gores.

Claim.—A corset comprising the bowed pieces *c' c' c c c c c' c'*, straight pieces B' B B B', within an intermediate zone or band and the gores A, all combined and arranged substantially as described.

No. 36,273.—C. F. BROWN, of Warren, R. I.—*Improvement in Mounting Ordnance.*—Patent dated August 26, 1862.—This improvement relates principally to the method of mounting a cannon for which a patent was granted to the said Brown on July 17, 1855, and it consists in combining the gun with the spheroidal or spherical portion that serves to close the opening or porthole by means of a slide, so as to enable the gun to be moved back into the vessel or fort and turned in such a manner to admit of its being loaded at its breech or muzzle without exposure to the enemy's guns.

Claim.—Combining the gun with the spheroidal, spherical, or circular portion A of the carriage by means of a vertically moving slide B, or its equivalent, whereby it is permitted to recoil or move back far enough to bring its muzzle within the said portion of the slide and so permitted to be brought within the vessel in such manner as to enable it to be loaded either at its muzzle or breech, substantially as herein specified.

No. 36,274.—JOHN CARTON, of Utica, N. Y.—*Improvement in Railroad Lamps.*—Patent dated August 26, 1862.—This invention consists in inserting in the space between the two tubes, which compose the burner below the wick and above the feed tube, a perforated metallic ring for the purpose of closing the space and compelling the oil fed to the wick to pass through such perforations, by which means an excess of oil is prevented from being thrown upon the wick by the jarring of the car, and also smoking of the lamp and waste of oil is prevented.

Claim.—The perforated ring, (one or more,) or other equivalent material, in combination with the tubes B' and B, constructed and operating substantially as described.

No. 36,275.—S. C. CHAMBERLIN, of Berlin, Mass.—*Improved Shoulder Stick for Finishing Boot and Shoe Soles.*—Patent dated August 26, 1862.—This device consists in the combination of a stationary gauge and adjustable polisher or reducing block with a socket and clamping devices, so that the polishing tools are separate from the gauges and can be adjusted as circumstances may require, and so as to admit of the substitution of one kind of polisher for another.

Claim.—The improved shoulder stick as made with the stationary gauge *c*, the separate and adjustable polisher or reducer *d*, the socket *a*, and the shoulder *f*, and its clamp-screw *h*, applied to the socket, and a cap *b*, substantially as specified.

No. 36,276.—A. P. COCHRAN, of Louisville, Ky.—*Improvement in Retainers for Tobacco Presses.*—Patent dated August 26, 1862.—The base and cap piece of the retainer are connected together by posts, the inner sides of which are parallel with each other, while the outer sides are inclined from the base upwards. The follower is guided in its upward and downward motion by tongues passing through slots in the posts. A retaining bar also passes through these slots and through flanges in the follower, and retained in position by a thumb-nut, the inclined shape of the outer surfaces of the post causing the rod and the washer blocks to hold the follower rigidly in its compressed position.

Claim.—Improved retainer for tobacco presses, the said retainer being composed of the base H, the cap F, the upwardly tapering and slotted connecting posts G G', the follower J, the retaining rod *a*, the washer blocks *c c'*, and the screw nut *b*, or the equivalents of said parts when arranged, combined and operating with each other, substantially in the manner and for the purpose herein set forth.

No. 36,277.—J. H. CONNELLY and JOHN COOK, of Wheeling, Va.—*Improvement in Wicks for Lamps.*—Patent dated August 26, 1862.—This invention consists of a tubular lamp wick having a nap on its inner surface for the purpose of facilitating, by capillary attraction, the ascension of the heavier kinds of oil, and providing for the escape of any excess of gases or vapors in the lamp.

Claim.—A tubular wick having a nap on its inner surface, substantially as herein described

No. 36,278.—G. H. CORLISS, of Providence, R. I.—*Improved Steam Boiler.*—Patent dated August 26, 1862.—This invention consists of a series of cylindrical generators containing tubes, within which the products of combustion are received from the furnace and passed into the chimney. These generators surround a circulation reservoir for the steam and water, the two being connected by means of short tubes near the lower ends of the generators. Connexions are also provided for supplying water from the reservoir to the generators, and for the passage of heated water back into the reservoir.

Claim.—The method of constructing steam boilers by combining cylindrical circulating reservoirs with cylindrical tubular generators, arranged and connected substantially as and for the purposes specified.

No. 36,279.—G. H. CORLISS, of Providence, R. I.—*Improved Method of Preventing Steam Boilers from Priming.*—Patent dated August 26, 1862.—The object of this invention is so to arrange the pipes which carry off the steam from the boiler as to prevent their exposure in naval warfare, without incurring the difficulty of priming; which is effected by means of the employment of numerous tubes through which the steam is passed before it reaches the main pipe, instead of apertures through the shell of the pipe.

Claim.—The method of preventing the priming of steam boilers by conducting the steam from a common steam chamber to the main pipe, through numerous tubular orifices, arranged substantially as and for the purpose specified.

No. 36,280.—G. H. CORLISS, of Providence, R. I.—*Improved Surface Condenser.*—Patent dated August 26, 1862.—To the upper side of a reservoir of the steam to be condensed are connected cylindrical tubes, flattened at their upper ends so as to form a contracted aperture for restricting the exit of air or vapor from within the tubes, for the purpose of preventing the steam which enters from the reservoir from passing through the tubes too rapidly for insuring perfect condensation.

Claim.—Constructing the tubes or condensing chambers of surface condensers with restricted apertures, substantially as described and for the purposes specified.

Also, the combination of a receiver A with a series of tubes B B, or their equivalents, each of which connects at one extremity with said receiver and at the other with the open air, substantially as described.

No. 36,281.—G. H. CORLISS, of Providence, R. I.—*Improvement in Steam Generators.*—Patent dated August 26, 1862.—The steam generator for the evaporation of salt or impure water is attached to the rear of the boiler, and is so constructed as to form a connecting flue from the boiler to the chimney and thus utilize the waste heat. This generator is connected with the surface condenser by an open pipe of sufficient area to give a free passage to the steam. A coil connected with the boiler by a pipe is placed in the bottom of the generator to increase the evaporation whenever the heat of the flue may be insufficient.

Claim.—A combination of a surface condenser with a supplementary generator which takes its heat from the flue leading to the chimney, for the purpose set forth.

Also, the combination of a surface condenser, a supplementary generator and coil of steam pipe, substantially as and for the purpose described.

No. 36,282.—T. M. DAVIS, of Philadelphia, Pa.—*Improved Refrigerator.*—Patent dated August 26, 1862.—The lining of this refrigerator is made of plates of glazed clay or stone ware, fitted and bolted together with packing or cement between their joints, so as to form a smooth air-tight surface.

Claim.—A refrigerator having its inner walls or lining A made of glazed plates, of clay or stone ware, constructed and secured together substantially in the manner described and set forth, for the purposes specified.

No. 36,283.—JOHN DEAN, of Worcester, Mass.—*Card Holder.*—Patent dated August 26, 1862.—This device is formed of a single piece of sheet metal, the outer edges of which are cut in some ornamental form. From the centre of this plate a piece of the metal is taken out by means of a stamp to form the opening for the picture; three of the sides of the opening are of irregular outline so as to admit of the projecting edges being folded back and serve as clamps to secure the picture and glass in place.

Claim.—Forming a portable frame or porte carte-de-visite from a single sheet of metal, in the manner described herein.

No. 36,284.—W. E. DOUBLEDAY, of Brooklyn, N. Y.—*Improvement in Hats.*—Patent dated August 26, 1862.—This invention consists in reversing the surfaces of the material of which the hat is formed, after it has been pressed, whereby the uninjured interior surface becomes the outside of the hat; the surface which has been subjected to the action of the female die forming the inside of the hat.

Claim.—A hat manufactured as herein specified, by inverting the surfaces after they have been shaped between heated dies, as set forth.

No. 36,285.—ALEXANDER DUNCAN, of York, Pa.—*Improvement in Smut Machines*—Patent dated August 26, 1862.—Upon the upper part of a vertical shaft is secured a rotating plate I having a circular horizontal bottom and inclined sides and provided with vertical spikes, over which is placed a corresponding stationary plate provided with teeth and a pendant rim. Below the plate I is arranged a cylinder formed of annular rims connected by vertical rods or beaters and provided internally with a fan H. Surrounding this cylinder is a perforated curb or hollow cylinder of sheet metal, provided on its inner surface with vertical bars bevelled on their inner surfaces and provided with teeth placed in an inclined position.

Below the fan H is a horizontal plate connected with a box that forms, by means of inclined bottoms, two air chambers, communicating at their lower parts with spouts that lead to two outwardly inclined spouts communicating with the lower fan case.

Claim.—First, the rotating concave plate I, provided with a circular horizontal bottom *j* and vertical spikes *k*, in connexion with the stationary plate K provided with the teeth *l* and a pendant rim *m*, arranged as and for the purposes specified.

Second, the cylinder G, formed of the annular rims *f f*, connected by the vertical rods or beaters *g*, and provided internally with the fan H, in connexion with the perforated curb or hollow cylinder L and bars M, having bevelled toothed surfaces *o o*, arranged as herein set forth.

Third, the combination of the air chambers *d d*, blast spouts N N, and fans H C, arranged with the cylinder G, to operate in conjunction therewith, as and for the purpose specified,

No. 36,286.—A. K. EATON, of New York, N. Y.—*Improvement in the Manufacture of Soap.*—Patent dated August 26, 1862.—This invention is explained by the claim.

Claim.—The use, as a constituent in soap making, of the refuse liquors which result from the treatment of straw or other vegetable fibres with alkalies, the said refuse liquors containing alkali and more or less silica and resin.

No. 36,287.—HENRY EDDY, of North Bridgewater, Mass.—*Improvement in Cribs for Horses.*—Patent dated August 26, 1862.—This crib is of box form, and provided with an opening in front, having around its edges a metal covering in connexion with an elastic material to protect it from the teeth of the horse. At each side of the lower part of the crib are placed inclined pieces of board, which may be made adjustable for the purpose of guiding the feed to a proper place. Inclined planes or partitions serve to prevent the hay, &c., from coming in contact with the horse's head, the lower end of which partitions may be adjusted to enlarge or diminish the openings on each side.

Claim.—First, the metallic collar A, with or without the flange *t*, in combination with the crib, substantially as described and for the purpose herein set forth.

Second, the use of the adjustable regulators of the feed M N, in combination with the sides of the crib E X, substantially as specified.

Third, the elastic material *g*, in combination with the spring C, substantially as described and for the purpose herein set forth.

Fourth, the manner of connecting and adjusting the plates B and O, as and for the purposes specified.

Fifth, the variable openings *d*, *p*, substantially as described and for the purpose herein set forth.

No. 36,288.—W. M. and J. B. ELLIS, of Washington, D. C.—*Improvement in Steam Boilers.*—Patent dated August 26, 1862.—The water legs of this boiler extend continuously from front to rear, and communicate with the body of the boiler by a series of openings through the shell of the boiler or through a plate connecting the flanges of the legs with the shell at the working water-line of the boiler, by which means the water is allowed to circulate freely from the legs to the boiler, and *vice versa*, and consequently the tendency to priming is avoided. The tubes are made of gradually increasing area from the upper to the lower series to prevent the products of combustion from passing too freely into and through the upper series of tubes, and so as to dispose the heat more equally and regularly through the water.

Claim.—First, connecting the water legs, extending continuously from the front to the rear of the boiler, to the shell of the boiler at the point of the working water-line of the boiler, substantially as herein set forth.

Second, gradually increasing the area of the tubes from the highest to the lowest tubes, as described.

No. 36,289.—H. V. FARIES, of Indianapolis, Ind.—*Improvement in Pipe Wrenches.*—Patent dated August 26, 1862.—A jaw of hooked form is connected by a pivot to a rigid or stationary jaw at the end of a handle or lever, the hook jaw extending over the face of the rigid jaw so that the implement will firmly grasp the article to be turned and adjust itself to its size, and also readily release itself at each backward turn of the lever handle. The hooked jaw is kept in contact with the stationary jaw by means of a flat spring secured to the latter and bearing upon the back of the hooked jaw.

Claim.—The jaw C, of hook form, when attached to the jaw B, and arranged relatively therewith to operate as and for the purpose herein set forth.

Also, the spring D, in combination with the jaws B C, arranged as and for the purpose specified.

No. 36,290.—W. O. C. FRITSCHLER, of Brooklyn, N. Y.—*Improvement in Weighing Apparatus.*—Patent dated August 26, 1862.—This apparatus consists of a bent lever, having its fulcrum in the upper end of a standard, upon one end of which lever is suspended the chain or scoop that holds the article to be weighed. The other end or arm forms an arc, described from the fulcrum as a centre, so that a scale, marked on the said arc, is caused to move behind a stationary index. The said end or arm is provided with a weighted box which contains one or two plumbing devices operating upon indices placed on the outside of the covers of the weighted box for the purpose of controlling the operation of the apparatus.

Claim.—The arrangement of the weighted box D, containing the plumbing devices *k*, *o*, *l*, in combination with the scales marked on the covers *i j* and on the arc *d*, and with the bent lever A, all constructed and operating substantially as shown and described.

No. 36,291.—J. S. GAGE, of Dowagiac, Mich.—*Improvement in Seed Coverers for Grain Drills.*—Patent dated August 26, 1862.—This device is formed with two covered pointed plates with spaces between them to allow the soil to pass through as the machine is drawn along, and having a slight projection on its upper edge, upon which a weight may be placed to press the coverer into the ground.

Claim.—The coverers A, open space B, and projection C, when combined and arranged to operate in the manner and for the purpose set forth.

No. 36,292.—A. C. GALLAHUE, of Katonah, N. Y.—*Improved Machine for Pegging Boots and Shoes.*—Patent dated August 26, 1862.—The nature and object of this invention will be understood from the claim; it does not admit of a brief description.

Claim.—First, the device as described for feeding the peg wood and pegs forward, to wit, by bringing the peg wood between the surface *r* and the roller *a'*, fig. 3, and in such connexion with the ratchet *c'*, fig. 1, and pawl *d'* and sliding box D', that by each backward movement of said guide box the ratchet C' is brought against the stationary pawl *d'*, and the peg wood and pegs are thereby moved forward previous to the descent of plunger H, as set forth.

Second, conveying the pegs forward by means of the peg receptacle *t'''*, directly over the hole or chamber in the stationary shoulder U, and driving them through said shoulder in such a manner that the plunger shall be limited in its descent by the lower surface of the shoulder, so as not to indent the sole.

Third, cutting off the pegs laterally from a strip of peg wood by the movable knife E' being brought against the surface of *r*, fig. 3, as set forth.

Fourth, the arrangement of the two frames J M, as shown. One, J, connected with the weight L, and the other, M, pivoted to J, and used with or without the spring R, for the purpose of keeping the boot or shoe properly presented to the awl and plunger, and thereby obviating the necessity of guiding the shoe by hand.

Fifth, the combination of the two slotted levers E E', and the awl and plunger bars F F', box K, and guide box D'.

Sixth, the double-jointed feeding pawl Z operated from the shaft B', as shown, when used in combination with the ratchet X, pinion W and rack P on block O, placed in the frame M, and arranged substantially as shown, to properly feed the boot or shoe to the awl and plunger, and also to adjust its operations to the various sizes of the shoes pegged.

No. 36,293.—W. F. GRASSLER and A. J. CUTTER, of Lewisburg, Pa.—*Improvement in Car Couplings.*—Patent dated August 26, 1862.—This invention consists in the employment of a hinge pin or bolt in connexion with a movable block, so arranged as to cause the cars to be coupled when they come in contact. The bolt is kept in position by a spring cap, which is operated by a lever to release the coupling link when necessary.

Claim.—The use of the hinge pin or bolt A in movable block B, in combination with the spring cap C, to throw it back into position, to be a self-coupler.

Also, the lever D when the same is used in combination with said hinge pin or bolt A, and movable block B, as set forth and described.

No. 36,294.—ROBERT HAMILTON, of Franklin, Ind.—*Improved Portable Sugar Evaporator.*—Patent dated August 26, 1862.—From the front end of the evaporating pan projects outwardly a flange within which fits the inner side of the furnace box, in such a manner as to prevent the incandescent fuel from being brought in contact with the pan, and also to prevent the flame from passing directly into the heating flues which extend through the pan. At the head of the pan is a vertical sliding damper for closing the mouth of the flues when desirable; the furnace box is also provided with a hinge damper in front, by means of which the amount or intensity of heat may be controlled and regulated.

Claim.—Giving such a shape to the furnace box B that it can be combined with the head of the evaporating pan A, by means of the flange F, and in such a manner that the said flange will prevent the incandescent fuel from being brought into direct contact with the said pan, whilst it will also prevent the flame from passing directly into the flues *g g*, all substantially as herein set foth.

Also, when the evaporating pan A is supplied with the flange F, and with the flues *g g*, combining the dampers *l* and *m* with the furnace box B, substantially in the manner and for the purpose herein set forth.

No. 36,295.—W. W. HANES, of Covington, Ky.—*Improvement in Explosive Projectiles for Ordnance.*—Patent dated August 26, 1862.—The projectile is composed of three principal parts, arranged in such a manner that the surrounding outside shell forms the hammer to the nipples or percussion caps attached to the inside shell or charge chamber. The inside shell or charge chamber is separated from the outside shell at the end containing the nipples and percussion cap, by a cushion of such substance as will prevent the nipple and caps from coming in contact with the outside shell, until it is desirable to be exploded by striking some object with sufficient force to cause the cushion to yield, and allow the charge chamber to advance forward, causing the inside caps to come in contact with the inside of the surrounding shell, thereby producing an explosion of both shells.

The outer shell is provided with projections, or ribs fitting in corresponding grooves in the inner shell, to prevent the latter from turning independently of the outer shell.

Claim.—First, constructing projectiles for ordnance with an outside shell consisting of two parts screwed together, for the purpose and in the manner set forth.

Second, also an independent inside shell or charge chamber, with two or more nipples and percussion caps attached, for the purpose of securing greater safety in charging, and certainty of fire when in use, substantially as described.

Third, further, the cushion C, for the purpose and in the manner specified.

Fourth, the projections or ribs E E with their corresponding grooves, for the purpose herein set forth.

Fifth, the combination of an outside shell made in two parts A A, with an independent charge chamber B, containing two or more nipples and percussion caps, with the projections or ribs E E and cushion C, substantially as described.

No. 36,296.—G. L. HARRIS, of Mobile, Ala., and SAMUEL HARRIS, of Springfield, Mass.—*Improvement in Sifting Machines.*—Patent dated August 26, 1862.—This invention consists in the combination of an inclined sieve with a triangular propelling cam and double inclined agitators, the latter being arranged upon the bottom of the sieve to pass over friction rollers so that while in operation the sieve will have an undulating vertical motion together with a longitudinal motion in a plane parallel with the inclination of the machine.

Claim.—The inclined sifter A in combination with the triangular cam E, and double-inclined agitator *k*, in the manner and for the purpose substantially as described.

No. 36,297.—J. K. HARRIS, of Allensville, Ind.—*Improvement in Baling Presses.*—Patent dated August 26, 1862.—This invention is designed as an improvement upon a press for which a patent was granted to the said Harris on August 20, 1861, and it consists in combining a follower with a system of levers, constructed and arranged in such a manner that the follower may be made to serve the double purpose of a follower and beater, and when acting as the latter serving to fill the press box, and compacting the material to be compressed thereon so that it shall be in proper condition for the subsequent pressing operation of the follower.

Claim.—First, the levers J J and arms N N, in connexion with a follower and beater B, arranged to operate as and for the purpose herein set forth.

Second, the slides O O connected with the arms N N of the levers J J, in connexion with the sliding bars *d d* on the follower B, all arranged substantially as and for the purpose herein set forth.

No. 36,298.—S. H. HARTMAN, of Pittsburg, Pa.—*Improvement in Machines for Punching Lynch-Pin Holes and Cutting off the Journals of Axles for Wagons, &c.*—Patent dated August 26, 1862.—This invention consists in cutting off and punching the linch-pin holes in the journals of wagons and other carriages at uniform distances from the shoulders of the said journals—the punching being done while the journal is tightly gripped and held to prevent the punch from spreading or cracking the metal, and the whole operation of gauging, cutting off, gripping, and punching, following each other in such rapid succession as to make them practically one operation.

Claim.—The combination of the clamps, the cutter and the punches, for holding, cutting off, and punching the linch-pin holes in the journals of wagon and other similar axles, the mechanism being constructed and operating substantially as herein described.

No. 36,299.—S. H. HARTMAN, of Pittsburg, Pa.—*Improvement in Slide Valves for Steam Engines.*—Patent dated August 26, 1862.—This invention consists in making the valve in two parts, one of which has a groove all around it, in which is placed a packing of rubber or its equivalent; the other part is provided with a tongue which fits into the groove of the first-named part and rests upon the rubber packing, so that the rubber shall press the two parts of the valve against their respective sides of the chest, but at the same time yield, should any undue pressure come upon one or both sides of the valves.

Claim.—In combination with a valve open through the centre, or with a lid made in two pieces, a groove or recess in one piece containing rubber packing, and a tongue or shoulder in or on the other piece, to bear against said rubber packing, for the purpose of making the sides of the valve work steam-tight, or nearly so, on opposite sides of the chest, as set forth.

No. 36,300.—JOSIAH HAYDEN, of Haydenville, Mass.—*Improvement in Water Elevators.*—Patent dated August 26, 1862.—The links that form the chain are each composed of one piece of wire bent in the form shown in the engraving, so as to present one side of the bucket uniformly to the spout. The periphery of the windlass wheel is formed into angular shaped teeth with the outer ends flattened, between which the links of the chain are caught.

Claim.—First, the curves *c d c*, in combination with the straight rods *a* and hooks *b*, embracing the curves *c c* of another link, as and for the purpose specified.

Second, the windlass wheel W, in combination with a flat chain, constructed as herein described and for the purpose set forth.

No. 36,301.—WILLIAM LARRABEE, of Clermont, Iowa.—*Improvement in Grain Winnowers.*—Patent dated August 26, 1862.—This machine consists of an upright spout, to the upper part of which is connected a fan box provided with a discharge spout and grain openings. In one side of the spout is a system of valves arranged in series of three, more or less, like the slats of a window blind, the valves of each series being connected by staples to a bar, so that each series may be closed and opened simultaneously with, or separately from, the others. Within the spout is also placed another series of valves which, when closed, form an inclined partition within the spout. The bars of these valves are operated by means of rods extending up through the top of the spout, so that each series may be opened and closed separately.

Claim.—The upright blast spout suction A, in combination with the valves F H, arranged as shown, and the fan D, as and for the purpose herein set forth.

Further, the supplemental valves K K, adjustable hopper M, and draught passage *e*, when arranged and combined with the valves F H, as and for the purpose herein set forth.

No. 36,302.—FRANCIS MURRAY, of Baltimore, Md.—*Improvement in Stamp Heads for Crushing Ores.*—Patent dated August 26, 1862.—The stamp head is constructed in two separate parts, the lower one of which is cast in a chill, with a wrought-iron shank dovetailed at its lower end and slotted near the top to receive an iron key, which passes through it and the upper portion of the stamp head. Upon the upper face of the lower portion, and surrounding the shank, is a plate of copper, or other ductile material, which serves to relieve the shoe from the excessive shocks of the blows.

Claim.—First, in a stamp head, the working face of which is cast in a chill, and is capable at pleasure of being attached to or removed from an upper or main section, so constructing the same by casting it around and upon a wrought-iron shank that said shank shall serve as a coupling to unite the shoe to the upper section of the stamp head, and also be capable of being used thereafter to cast a new working face or shoe upon, substantially as described.

Second, in connexion with a stamp head for crushing ores, the use of a ductile metallic buffer, or its equivalent, substantially in the manner and for the purpose described.

No. 36,303.—H. W. PUTNAM, of Cleveland, Ohio.—*Improved Mangle.*—Patent dated August 26, 1862.—This invention relates to the method of constructing the framework and securing the ends together, and also of attaching the machine to the leaf of a table and to the finger gear, so that the rollers will be caused to move in concert without slipping when substances are introduced between them.

Claim.—The framework A F G H, in combination with the rollers B B′, finger gear I I, foot piece K, claw and set screw L, when these parts are constructed, arranged, and operated substantially as and for the purpose set forth.

No. 36,304.—E. A. L. ROBERTS, of New York, N. Y.—*Improved Thermometrical Steam Gauge.*—Patent dated August 26, 1862.—This invention consists in the construction of a metallic thermometrical gauge of one or more fusible metals or alloys so compounded as to fuse at different temperatures, and used in combination with a float or standard resting upon the surface of such metal or alloy, so that, as the latter fuses, the said weight or standard will descend, and thus give immediate notice of the existing state of the temperature or of any change of heat or pressure.

Claim.—A metallic gauge, consisting of one or more fusible metals, in combination with the indicator or indicators *b b*, or their equivalent, so as to indicate by their position or motion, and either with or without an alarm, the temperature of a steam vessel, the whole constructed substantially as and for the purpose set forth.

No. 36,305.—HARRY SEYMOUR, of Dartmoor, Great Britain.—*Improved Artificial Fuel.*—Patent dated August 26, 1862.—This invention consists in the employment of petroleum in its natural or in a refined state, or of coal oil or allied manufactured substances, in combination with certain mineral substances, such as silica, alumina, lime, and oxygenated manganese, which are mixed with refuse vegetable matter, such as peat, earth, sawdust, tanners' bark, &c., for the purpose of obtaining a fuel which can be used in the place of wool or coal.

Claim.—The composition for an artificial fuel, made of the ingredients and in the manner and proportions herein set forth.

No. 36,306.—AARON SMITH, of Brooklyn, E. D. N. Y.—*Improved Gas Regulator.*—Patent dated August 26, 1862.—This invention consists in an arrangement of the passages provided between a throttle or other balanced valve employed to regulate the flow of gas, and the interior of an inverted cup, within which the pressure of the gas acts with a tendency to close the valve, and an arrangement of the connexions between the said valve and cup, so that the device may be applied between the main pipe and the meter to regulate and equalize the pressure of the gas before its entrance into the meter and insure an accurate measurement of the gas, and also to regulate the burners.

Claim.—Combining the throttle or other balanced valve E, and floating inverted cup D, by the arrangement of passages C *c k k*, and crank connexions *h h k k*, substantially as herein described.

No. 36,307.—C. W. SMITH, of Evans, N. Y.—*Improved Washing Machine.*—Patent dated August 26, 1862.—Through the handles of an ordinary wash tub are placed the ends of a cross-bar which supports an upright or standard to which the lever is attached. To the lever is pivoted a shaft having a dashboard secured to its lower end.

Claim.—The combination of the dasher F, the bar B, the standards C E, and the lever D, arranged to be used in connexion with an ordinary wash tub, substantially as described.

No. 36,308.—P. A. STECHER, of New York, N. Y.—*Improved Lamp-Shade Holder.*—Patent dated August 26, 1862.—This device consists of a series of radial braces, the ends of which are bent in opposite directions, and which are connected and held in place by two or more rings, so that when applied to the chimney of a lamp, the upper ends of the braces rest upon the bulb and the shade is supported by the lower ends.

Claim.—A lamp-shade holder A, constructed and applied substantially as herein shown and described.

No. 36,309.—ALOIS SCHWEIZER and GEORGE JANSEN, of Cleveland, Ohio.—*Improved Scrubbing Brush.*—Patent dated August 26, 1862.—This invention consists in combining with a scrubbing brush an elastic rubber placed at such an angle to the brush as to allow either to assume a perpendicular position on the floor when the handle is held in position for use.

Claim.—As a new article of manufacture, a combined floor scrubber and wiper, when the several parts are constructed and arranged substantially in the manner and for the purpose herein described.

No. 36,310.—R. M. STIVERS and G. W. V. SMITH, of New York, N. Y,—*Improvement in the "Fifth Wheel" of Carriages.*—Patent dated August 26, 1862.—This invention consists in so constructing a spring brace and combining it with the fifth wheel, (which latter consists of two curved pieces fitting the one over the other,) as to make it serve the double purpose of a spring and stay rod, by which means the two parts of the wheel are kept always in contact and prevented from rattling without binding or causing undue friction of their rubbing surfaces.

Claim.—The combination of the stay rod or spring brace G with the perch A, front axle C, and parts *a* and *b*, the whole constructed and arranged in relation to each other as and for the purpose set forth.

No. 36,311.—A. E. TEAL and WILLIAM RANSOM, of Cicero, Ind.—*Improvement in Smut and Grain-Cleaning Machines.*—Patent dated August 26, 1862.—Upon each side of the machine is a vertical spout connected at its upper end by a horizontal passage *g* to a fan case. This passage is provided with valves made adjustable so as to regulate the strength of the blast. An adjustable valve is also placed in a small cylinder fitted upon each upper part *g* of the spouts. In the upper part of the machine is a fan provided with a tubular shaft. The fan case communicates by means of spouts with a cylindrical screen provided with a beater which is formed of blades attached to the ends of arms secured to a hollow shaft, the object being to break the smut and separate it thoroughly from the grain, the latter being at the same time separated from light impurities and chess.

Claim.—First, the valves *l* placed within cylinders N on the spouts K, and regulated by springs and nuts, as shown, or their equivalents, in connexion with the valves L M, and discharge openings A', for the purpose specified.

Second, the tubular perforated shafts J D of the beater I and fan C, when said beater and fan are arranged in connexion with the suction spouts K K and blast spout E, to operate as set forth.

No. 36,312.—ELI THAYER, of Worcester, Mass.—*Improvement in Plane Angulometers.*—Patent dated August 26, 1862.—This invention consists in so constructing and hanging a pendulum and connecting it with a portion of the surface of a sphere that it will indicate at once whether any plane to which it is applied is level; and if not so, will show the degrees of the angle, whether of elevation or depression, which such plane makes with the horizon.

Claim.—The pendulum moving upon three or more bearings in the same plane, and carrying upon its top a graduated arc, and its combination with the spherical surface, and the opening therein, substantially as set forth and described, and for the purpose indicated.

No. 36,313.—W. H. TOWERS, of New York, N. Y.—*Improvement in Pins.*—Patent dated August 26, 1862.—This invention consists in enlarging the ordinary pin near its point, for the purpose of preventing it from becoming casually detached from the clothing or article in which it is placed.

Claim.—A pin for securing clothing and other objects, made with a slight spherical or oval enlargement near the point, in the manner and for the purpose described.

No. 36,314.—J. F. TOWNSEND, of Cambridgeport, Mass.—*Improvement in Spermatorrheal Rings.*—Patent dated August 26, 1862.—The nature of this invention will be understood by reference to the claim and engraving.

Claim.—The instrument composed of the two bows A B, made with a rest *b*, and jointed together as described, the band C, adjusting screw *e*, set screw *a'*, and nuts *g f*, the whole combined as herein set forth.

No. 36,315.—W. F. WARBURTON, of Philadelphia, Pa.—*Improvement in Army and Navy Caps.*—Patent dated August 26, 1862.—Attached to and forming a part of the cap is a loose fold provided with an elastic band or loop, and used in connexion with a detachable cape, so that the fastenings which secure the cape to the cap may be concealed by the said fold.

Claim.—The loose fold *b*, with its elastic loops, or their equivalents, in combination with the detachable cape G, the whole being arranged substantially as set forth for the purpose specified.

No. 36,316.—J. R. WHITTEMORE, of Chicopee Falls, Mass.—*Improvement in Hay or Feed Cutters.*—Patent dated August 26, 1862.—The mouth-piece of the machine is formed of a single piece of metal, provided with flanges, to which the frame is attached. The cutter lever, to which the knife is secured, has its fulcrum upon an extended portion of the mouth-piece. The fulcrum consists of a hub, through which passes a bolt formed with a spherical portion, and so connected with a wedge as to admit of the cutting edge being set in or out from the face of the mouth-piece, so that it can be kept pressed against the same throughout its whole cut.

Claim.—First, the combination of the hopper B, legs C C, and flanged mouth-piece A, constructed as herein described, whereby the mouth-piece serves as a support for B and C, substantially in the manner and for the purpose as herein set forth.

Second, the combination of the cutter lever E, bolt *h*, and wedge *o*, when constructed and operating substantially in the manner and for the purpose herein described.

No. 36,317.—JACOB WISTAR, of Greencastle, Pa.—*Improvement in Flour Bolts.*—Patent dated August 26, 1862.—Attached to the ribs of the bolt, and serving as braces to the same, are curved rods, upon which the balls or knockers are placed, and so arranged as to have no connexion with the shaft of the bolt, as is usual, but are caused to act directly upon the ribs.

Claim.—The use of the slide rods or braces D, extending from rib to rib, and carrying sliding balls or knockers E, thus bracing the ribs, and at the same time bringing the action of the knockers chiefly upon the ribs and bolting cloth, substantially in the manner and for the purposes set forth.

No. 36,318.—G. W. WOODWORTH, of Cleveland, Ohio.—*Improvement in Water Elevators.*—Patent dated August 26, 1862.—The spaces at the intersection of the forks of the wheel are flattened for the reception of the edge of the link. The points of the forks are connected by means of a bar or rod extending from the outer ends of one fork to the next, forming an entire circle on both sides of the wheel.

Claim.—The combination of the flat places A and inverted arch or section of a circle B with the bars forming the perimeter which connects the forks, as above described.

No. 36,319.—EDWIN BAILEY, of Baltimore, Md., assignor to Himself and HENRY MCSHANE, of the same place.—*Improvement in Cut-Offs for Hydrants.*—Patent dated August 26, 1862.—This invention consists in combining with a plug case, having a series of openings through it for the water to pass through, a cut-off on the valve or plug stem, that gradually, by the recoil of the valve spring, closes the said openings, thus gradually cutting off the flow of water without jar or sudden stoppage, and avoiding the breaking or bursting of the water pipes.

Claim.—The combination of the spring cut-off *d* with the series of openings or perforations *a*, for the purpose of gradually shutting off the through flow of water, to prevent jarring and breaking of pipes, substantially as described.

No. 36,320.—R. H. CUNNINGHAM, of Schaghticoke, N. Y., assignor to W. P. BLISS, of the same place.—*Improvement in Cylinders for Polishing Gunpowder.*—Patent dated August 26, 1862.—This invention consists in the employment of a valve, made of leather, secured to a block of wood or other rigid material in such a manner that the leather will conform to the curve of the cylinder, and so that it can be tightly closed by passing a wedge through a staple projecting from the rear of the valve. Upon the valve is fastened a stationary strip of wood, which is let into the inner surface of the cylinder, where it is held by means of

screws, so that the leather constituting the valve will be drawn up against the inner surface of the cylinder, thereby rendering it as even as possible; the object being to produce a perfectly polished powder, which will not be cut or bruised.

Claim.—First, the arrangement and combination of the piece of leather *b* with the block of wood or metal *c* and strip *d*, each being shaped to correspond to the inner surface of the cylinder, substantially as and for the purpose described.

Second, the arrangement of the stationary strip *d*, let into the inner surface of the cylinder, in combination with the valve B, as and for the purpose shown and specified.

No. 36,321.—SAMUEL MASON, of Northfield, Conn., assignor to the NORTHFIELD KNIFE COMPANY.—*Improvement in Pocket Knives.*—Patent dated August 26, 1862.—This invention is explained by the claim.

Claim.—A pocket knife having a handle of malleable cast iron with a rough or corrugated exterior, in imitation of buckhorn, as herein set forth.

No. 36,322.—WILLIAM PETERS, of Baltimore, Md., assignor to Himself and ALFRED BUCK, of the same place.—*Improvement in Covering Steam Boilers.*—Patent dated August 26, 1862.—This invention consists in covering steam boilers, pipes, cylinders, &c., with sheets or slabs made of a combination of asbestos and hemp, or some vegetable or animal fibre or material, or with mineral substances.

Claim.—Covering steam boilers, pipes, cylinders, &c., with the sheets, plates, &c., of the composition herein named.

No. 36,323.—C. D. SPEARS, of Lisbon, Maine, assignor to Himself and F. BUCKMAN, of Bowdoinham, Maine.—*Improvement in Water Wheels.*—Patent dated August 26, 1862.—Within a quadrilateral box or case which constitutes the penstock is placed a "scroll" formed of three segmental parts placed eccentrically with each other so as to leave induction openings between them at their contiguous ends. Within this scroll, and attached to an upright shaft, is a wheel which is composed of arms of such a length that the ends of the buckets will just clear the inner ends of the segments of the scroll as the wheel rotates.

Claim.—First, the penstock A and the scroll B, the latter being placed within the former, and constructed of segments *b*, arranged eccentrically with the wheel C, as shown in combination with the wheel C and central discharge opening *f*, all arranged as and for the purpose set forth.

Second, the buckets *e* attached to the arms *d* of the wheel C, in an oblique position, as shown and described, when said wheel thus constructed is used in combination with the scroll B, penstock A, and central discharge opening *f*, as herein specified.

No. 36,324.—J. M. STIVEN, of New York, N. Y., assignor to Himself, M. TUOMEY, and JOHN ELDER, Jr., of the same place.—*Improved Boiler Feeders.*—Patent dated August 26, 1862.—This invention consists in the employment of a float, forming a valve in combination with a pipe attached to the upper side of the cylinder in which the float is placed, and passing through the float. The lower end of this pipe forms a seat for the float valve, and the water will descend through the pipe until the proper quantity is in the boiler, when the float will rise in the cylinder so that the lower end of the pipe will be closed by the float valve and the flow of water stopped.

Claim.—The float *f*, provided with the pipe *g*, in combination with the supply pipe *e* and valve *i*, the parts being fitted and acting in the manner and for the purposes specified.

No. 36,325.—E. A. TURPIN, of New York, N. Y.—*Improvement in Breech-Loading Ordnance.*—Patent dated August 26, 1862.—The construction of this implement is explained by the claim. The breech-plug is fitted in the breech of the gun, so that it may be turned round as it is inserted and grind out any refuse left on its seat, and thus secure a close adaptation of the breech-plug to the seat.

Claim.—Closing the breech of a piece of ordnance or other form of fire-arm by means of an axial plug, having a smooth cylindrical surface, and a conical end fitting a corresponding seat in the breech of the gun, the said plug being adapted to be turned upon its seat and held firmly in contact therewith by means of a tapering key or wedge C, passing transversely through the breech and plug, all as herein shown and described for the purposes set forth.

No. 36,326.—ISAAC WINSLOW, of Philadelphia, Pa., assignor to J. W. JONES, of Portland, Maine.—*Improvement in Preserving Vegetables in Hermetically Sealed Cans.*—Patent dated August 26, 1862.—This invention is explained by the claim.

Claim.—Preventing the bursting of hermetically sealed cans or other vessels, while they are exposed to heats for cooking or preserving their contents, by means of puncturing such cans or vessels when first heated, or otherwise giving vent to the contained air soon after heating, the cans or vessels being thereafter immediately resealed and the heat continued, substantially in the manner and for the purposes set forth.

No. 36,327.—STUART PERRY, of Newport, N. Y., assignor to C. H. A. CARTER, of New York, N. Y.—*Improvement in Circuit Horse-powers.*—Patent dated August 26, 1862.—This

invention consists in the employment of what are called "idlers," which, without creating power, are caused to transmit without friction the power exerted by the friction wheels, in combination with the power transmitting rollers or wheels of a horse-power, so that there shall be the least possible amount of pressure or strain upon the journals of said wheels as compared with the traction between them. The pressure between the rolling contact surfaces is regulated by means of a disk of rubber placed upon a vertical rod, in connexion with a nut upon the upper end of the rod.

Claim.—The combination of friction wheels and idlers, substantially in the manner and for the purpose herein described.

Also, in combination with the friction wheels and idlers, the elastic pad *f* and nut *e*, for regulating the pressure between the rolling contact surfaces, substantially as and for the purpose set forth.

No. 36,328.—JOHN AGATE, of Cuba, N. Y.—*Improved Machine for Holding and Filling Bags.*—Patent dated September 2, 1862.—This apparatus is composed of a feeding hopper mounted upon legs, the bottom of the hopper being provided with a slide or cut-off and hooks, to which the bags to be filled are attached.

Claim.—The bag holder and filler, constructed and arranged substantially in the manner specified.

No. 36,329.—FRANCIS ALGER, of Boston, Mass.—*Improvement in Fuzes for Explosive Shells.*—Patent dated September 2, 1862.—This invention consists in so arranging a time fuze that it will be displaced when the fuze strikes, and allow free ingress into the fuze case for the powder from the shell, or free egress for the flames from the time fuze.

Claim.—First, the construction and arrangement of a sliding time fuze within the fuze case, so that the shell will be exploded by striking, substantially in the manner described.

Second, the elastic packing ring *h*, applied and operating substantially as described.

Third, the washer *g*, applied and operating substantially as described.

Fourth, the arrangement of a hammer, fulminate and time fuze, substantially in the manner and for the purposes specified.

No. 36,330.—W. H. BABCOCK, of Homer, N. Y.—*Improvement in Water Elevators.*—Patent dated September 2, 1862.—This device is composed of a casting adapted to fit loosely upon a pin or projection fixed in the hand-crank in connexion with a bent lever, ratchet teeth, and a coiled spring, so as to enable the bucket to be easily and securely elevated or lowered by a rotary or reciprocating motion of the crank.

Claim.—The arrangement of the spring K, projection J, piece U V, and pawl E *e*, for operation with the loose crank and ratchet wheel and frictional surface P, substantially in the manner herein set forth.

No. 36,331.—A. C. BAKER and JOHN VAN DYNE, of Hyde Park, N. Y.—*Improvement in Car Coupling.*—Patent dated September 2, 1862.—Within the draw-head of the car are arranged two yielding jaws held in position by means of springs. Attached to the jaws are transverse bars which, by means of the springs, are held in contact with levers upon a shaft fitted horizontally in the draw-head between the jaws. The ends of the shaft extend through the side of the draw-head, and have each an arm attached to them extending upward and connected by a cross-bar, so that by pressing the latter with the foot, the brakeman is enabled to disconnect the cars, the act of coupling being automatic.

Claim.—The yielding jaws B B, with the transverse bars D D attached, in combination with the shackle J and levers E E, the latter being placed on the shaft F, which is provided with the arms G G, connected by the cross-bar H; the above parts being used with or without the guides I I, and fitted in or applied to the draw-head A, as and for the purpose set forth.

No. 36,332.—J. F. BAKER, of West Yarmouth, Mass.—*Improvement in Invalid Bedsteads.*—Patent dated September 2, 1862.—This invention consists in the employment of two rollers hung in bearings secured to the posts of the bed. One end of each roller is provided with a pawl, which engages with a corresponding ratchet, and to each roller is secured a sheet, so that by turning the rollers, the changing position of the sheet will enable the patient to be turned over in bed.

Claim.—The arrangement of the rollers C C′, sheet I, ratchets D and D′, and the interchangeable bearings *b b′*, operating together, substantially in the manner and for the purpose herein described.

Second, The double pawls F *f*, so arranged as to be self-supporting, substantially as and for the purpose herein set forth.

No. 36,333.—A. W. BRINKERHOFF, of Upper Sandusky, Ohio.—*Improved Device for Husking Corn.*—Patent dated September 2, 1862.—This device is formed of a single piece of metal, curved so as to fit within the palm of the hand when closed, and over the forefinger and back of the hand, and provided with a hooked projection to operate upon an ear of corn to remove the kernels.

Claim.—The herein described corn husker, composed of a clasp H and a hooking tooth

Fifteenth, the formation, by seed-planting machines, of the double furrow

Claim.—The herein described corn husker, composed of a clasp H and a hooking tooth B, whether formed entire of one piece of metal or by combining the hooking tooth with a metallic, leather or other clasp or band, by any of the common modes of attachment, such as riveting and soldering, as and for the purposes set forth.

No. 36,334.—A. W. BRINKERHOFF and A. T. BARNES, of Upper Sandusky, Ohio.—*Improvement in Fruit Gatherers.*—Patent dated September 2, 1862.—This device is composed of two jaws, the upper one of which is provided at its edge with a blade and a stop for preventing the lower part from passing too far within the upper one. The lower jaw is kept closed by a spring, and is operated by means of wires extending down to the handle, the fruit being conveyed to the ground through a flexible conducting tube.

Claim.—First, in fruit gatherers the use of the metallic cap or upper jaw C, with blade B and stop S, substantially as and for the purposes described.

Second, in combination with the cap or upper jaw C, blade B and stop S, we claim the arrangement of handle H, lower jaw A, adjustable, actuating wires W and conductor P, substantially as and for the purposes set forth.

No. 36,335.—A. W. BRINKERHOFF, of Upper Sandusky, Ohio.—*Improvement in Corn-Planters.*—Patent dated September 2, 1862.—The nature and object of this invention will be understood by the claim.

Claim.—First, so constructing the main framework of corn-planting machines as that an additional framework, combining the seeding devices, shoes, attendant's seat, and elevating lever, may be placed and carried thereon, substantially as described, and for the purposes set forth.

Second, so combining with the main framework of corn-planting machines an additional framework containing the seeding devices, shoes, and attendant's seat—all of which are forward of the centre of the wheels or ground supports—the whole supported and carried on the main framework, and so that the said additional or upper framework may be either added or removed to or from the main framework without in the least degree disarranging any of their parts, substantially as and for the purposes set forth.

Third, so constructing corn-planting machines as that the shoes or furrow openers shall at all times when relieved of the weight of the attendant, and without manipulation, be raised above the ground by the weighted lever *m*, and there carried, as and for the purposes set forth.

Fourth, so constructing corn-planting machines as that the weight of the attendant who operates the seeding mechanism is necessary to and will force the additional framework, to which the shoes are attached, down upon the main framework, thereby causing them to penetrate the earth to a certain and uniform depth at all times, producing uniformity in the depth of planting, which may be varied as desired by notched slide *h*, as set forth.

Fifth, so constructing corn-planting machines as that the attendant or person who operates the seeding mechanism may, by placing his feet upon the lower or main framework, and gradually rising, relieve the additional or upper framework of his weight, thereby allowing the shoes to rise above the ground for the purpose of turning at the ends of the fields and passing over intervening obstacles without the assistance of a second attendant, or the necessity of dismounting, as set forth.

Sixth, in combination with corn-planting machines, supported mainly upon not less than two wheels and slightly upon the horses' necks, and with its seeding devices forward of the centre of the wheels, and which are elevated automatically, a hinged or yielding joint in the rear of all points of support, as described and for the purposes set forth.

Seventh, in seed-planting machines the automatic elevation of the shoes or furrow openers above the ground, for the purpose of passing intervening obstacles, turning around, and transporting the machine from place to place, as set forth.

Eighth, in combination with a corn-planting machine, wherein that portion of the framework containing the seeding devices is elevated automatically, and having its seeding devices forward of the centre of the wheels, so connecting the parts between the main and additional framework as that by simply removing the bolts at *c c*, figs. 1 and 4, the additional framework may be removed, having the main framework perfect for marking the ground preparatory to planting, as set forth.

Ninth, the weighted lever *m*, or its equivalent, in combination with the additional framework, as and for the purposes set forth.

Tenth, the weight K, on lever *m*, adjustable when used in combination with seed-planting machines, for the purpose of accommodating it to the amount of seed in the boxes, and varying weights of attendants, as set forth.

Eleventh, in combination with corn-planting machines, the metallic plates T T, constructed as described, forming a receptacle for the neck of shoe S′, the bearing for the shaft of cylinder 4, and a ready and firm attachment for seed boxes 30 30, as set forth.

Twelfth, in combination with corn-planting machines, the hounds *f f*, when constructed as described, thereby saving all necessity for wood and bolts in their manufacture.

Thirteenth, the combination and arrangement of cylinder 4, with metallic base 6 6, and metallic cap 3 3, elastic cut-off 10 10, and dish or hopper 21, as and for the purposes set forth

Fourteenth, providing the face of cylinders of seed-planters with oblique grooves, in combination with seed cells, substantially as described and for the purposes set forth.

Fifteenth, the formation, by seed-planting machines, of the double furrows *w w*, fig. 10, with the continuous scatterer *x* between them, as described, and for the purposes set forth.

Sixteenth, the inverted v-shaped opening in the lower front part of the shoe S′, or its equivalent, for the purpose of forming the double furrows and continuous scatterer, and to prevent the shoes from becoming clogged, as set forth.

No. 36,336.—A. W. BRINKERHOFF and A. J. FAILOR, of Upper Sandusky, Ohio.—*Improvement in Field Rollers.*—Patent dated September 2, 1862.—This invention is explained by the claim.

Claim.—Applying directly to the centres of field rollers, as near as we possibly can, a single projection cast in sections, but forming one continuous marker when applied to the roller, and attached or held in place by screws or bolts, whereby they may be easily applied to the roller for marking corn ground and as easily removed therefrom, leaving the roller in proper form for use on meadows, or for preparing other ground when smooth surface is desired, substantially as and for the purpose set forth.

No. 36,337.—C. M. BROMWICH, of South Boston, Mass.—*For Draught Attachment for Lamp Boxes.*—Patent dated September 2, 1862.—This invention is designed more especially to be used with coal-oil lamps, and consists in attaching to the box which contains the lamp an additional box having a central chamber, and provided at its upper and lower parts with apertures for the admission and escape of air, in connexion with an inverted box or deflector suspended from the upper part, for the purpose of furnishing a steady and uniform supply of air to the flame and preventing it from flickering.

Claim.—The box B, provided with an elevated chamber C, in combination with a box D perforated at its upper and lower part as shown at *d e*, and having a suspended box or deflector E within it, all arranged as shown, and used with or without the box A, as and for the purpose herein set forth.

No. 36,338.—HIRAM BURLEW, of Lock Haven, Pa.—*Improved Composition for Concrete Pavements.*—Patent dated September 2, 1862.—The ingredients used in this composition are gravel or broken stone, coarse sand, coal ashes and cinders, calcined plaster, and pine tar.

Claim.—The employment or use of a composition for paving made of the ingredients herein specified, and mixed together in the manner and in about the proportion described.

No. 36,339.—G. F. J. COLBURN, of Newark, N. J.—*Improvement in Applying Reflectors to Lamps.*—Patent dated September 2, 1862.—This invention consists in the application of a reflector to the upper part of a lamp by means of a wire frame so that it can be readily turned upon the lamp, the reflector being pivoted so as to enable it to be turned at any desired angle with the flame of the lamp.

Claim.—The mode herein described of applying reflectors to lamps, for the purpose specified.

No, 36,340.—A. O. CRANE, of Hoboken, N. J.—*Improvement in Submarine Carriages.*—Patent dated September 2, 1862.—This invention consists in constructing the carriage with a joint or hinge in such a manner that it may be moved along on the bed of the river a greater or less distance beyond the lower end of the ways, so as to enable vessels to be floated over and upon the carriage and touch at a point near the upper end of the latter, by which means vessels of a greater draught than usual may be hauled up in shallow places.

Claim.—A carriage or cradle for submarine railways, constructed of two or more parts, connected by hinges or joints, to operate as and for the purposes herein set forth.

No. 36,341.—JOSEPH DEFOSSEZ, of Paris, France.—*Improvement in Safety Lamps.*—Patent dated September 2, 1862.—This invention relates to that class of lamps known as Davy's safety lamps, and it consists in the application to the cover of the lamp of a pneumatic locking device in such a manner that neither the cover nor the wire gauze protection can be removed until, by the application of an air pump or by other suitable means, the bolt of the locking device is withdrawn.

Claim.—The pneumatic locking device *m n o*, in combination with the oil reservoir A, top plate F, and chimney D, all constructed and operating substantially in the manner and for the purpose herein shown and described.

No. 36,342.—JOHN DU BOIS, of Williamsport, Pa.—*Improvement in Dams.*—Patent dated September 2, 1862.—This invention consists in constructing a shoot for passing boats, logs, rafts, &c., through a dam in such a manner that the available working depth of water within the shoot shall remain the same, notwithstanding the depth of the water above the dam may vary and draw down during the passage of boats, &c., and by means of which the same are passed from a point above to a point below the dam, without being subjected to a perpendicular fall of water between the two points during their passage.

Claim.—First, in a dam shoot, which is operated by hydrostatic pressure beneath an apron, a divided apron having its parts hinged at the point of junction, substantially as and for the purpose described.

Second, in a dam shoot having a divided apron, a fixed articulating joint at one extremity of the apron, in combination with a sliding joint at the opposite extremity of the apron, for the purpose set forth.

Third, a dam shoot having an apron made in sections H H′, hinged together at their junction as at *i*, the lower section H′, articulating upon a fixed hinge, and the upper end of the section H, travelling in a horizontal slot at the bottom of the flume, the whole being operated substantially in the manner and for the purpose described.

No. 36,343.—J. B. EASLAND, of Bridgeport, Conn.—*Improvement in Settees for Railroad Passenger Cars.*—Patent dated September 2, 1862.—In this device the seat and back are suspended upon the same pivots, and upon the ends of the seat and corresponding part of the frame are a series of projections so arranged that by raising the seat and moving it forward it will assume an inclined position to which the back will consequently conform, the degree of inclination being changed as desired.

Claim.—Suspending the seat thereof from the same pivots upon which the back swings, and so connecting the arms of the seat and back with each other that any desired inclination may be given to the former by the mere raising and lowering of the latter, substantially as described.

No. 36, 344.—B. W. FAY, of Boston, Mass.—*Improvement in Sweats for Hats.*—Patent dated September 2, 1862.—This invention consists in first running an ornamental seam in the sweat band at a short distance from one edge, when it is sewed to the hat by stitches just below the ornamental seam; the sweat band is then turned down into the hat and covers the stitched parts.

Claim.—The sweat herein described, prepared with an ornamental seam *g g*, and secured to the hat in the manner substantially as set forth.

No. 36,345.—WILLIAM GRANGE, of Augusta, Ky.—*Improvement in Harrows.*—Patent dated September 2, 1862.—This device is constructed of two concentric rings, to the outer one of which is secured a number of short blocks provided with harrow teeth. This part is connected to a central rotating hub by means of curved arms, each of which branches into two arms, and each of the latter being attached to one of the toothed blocks. The inner ring is secured by radial arms provided with teeth to a hub rotating on the same central stem or shaft. Upon each ring rests a roller attached by an arm to the shaft at opposite sides of the machine, which causes the teeth upon one side of each ring to enter more deeply into the ground than on the opposite side, and thus, as the machine is drawn over the ground, the rings and teeth are caused to move concentrically and simultaneously in opposite directions.

Claim.—The peculiar arrangement of the arms *c* and *c′*, outer rotating frame A′, and roller E, in connexion with the inner rotating frame B′ and roller F, the two rotating frames being carried by and rotating concentrically in opposite directions upon the same central stem C, as set forth.

No. 36,346.—WILLIAM GREGG, of Philadelphia, Pa.—*Improved Refrigerator.*—Patent dated September 2, 1862.—This invention consists in placing the ice box in the centre of the bottom of the refrigerator so that its lower end shall project a short distance through the same and serve as a cover to a water cooler placed underneath the refrigerator.

Claim.—Combining a water cooler with a refrigerator so that the latter, in connexion with its ice box, shall form the cover of the water cooler, the whole being arranged together so as to operate in the manner described for the purposes specified.

No. 36,347.—T. F. GRIFFITHS, of Dansville, N. Y.—*Improved Holdbacks for Carriages.*—Patent dated September 2, 1862.—This device consists of a clasp which is secured to the upper part of the thill, and provided with a slot or mortise to receive one end of a hook. On each side of the mortise is a raised ear recessed to receive lugs or projections on each side of the hook. The hook is pivoted eccentrically so that by sliding it into the recesses and turning it down it will be securely held in place, the holdback strap being secured in a slot in the outer end of the hook. In case the whiffletree breaks, or the lugs be broken or unhitched, the hook will itself leave the clasp and release the horse from the vehicle.

Claim.—The employment or use of the clasp C and the hook B, they being constructed substantially in the manner specified, and operating conjointly for the purposes set forth.

No. 36,348.—WILLIAM GROVER, of Holyoke, Mass.—*Improved Gas Regulator.*—Patent dated September 2, 1862.—This invention consists in combining the inlet and outlet chambers of a gas regulator by means of an oscillating siphon-shaped pipe so applied as to form a means of communication through which the gas passes from one chamber to another, and so combined with an inverted cup and with basins of mercury as to constitute the regulating valve. The fulcra of the oscillating pipe consist of two fixed knife-edged bearings arranged within a mercury cup so as to secure at all times a free movement of the pipe.

Claim.—The combination with the oscillating pipe D and its fulcrums *j j* of the inverted cup E and its arms *k k*, in the manner herein shown and described.

Also, the arrangement of the fulcrums *j j* within the mercury cup *h*, as herein shown and described.

No. 36,349.—JASPER HAZEN, of Albany, N. Y.—*Improvement in Beehives.*—Patent dated September 2, 1862.—This invention consists in the arrangement of a central apartment for the swarm covered with a glass and divided at the centre, with boxes at the top and sides, the upper boxes being supported by bars, which also form guides for the comb, by which means a free communication is formed between the upper boxes and principal apartment, so that the swarm will commence work in the hive and boxes at the same time, and the early-made honey be secured for use.

Claim.—The combination of the parts A A, boxes B B B and C C, adjustable bottom board D, and bars G G, in one hive, as specified.

No. 36,350.—J. M. HENDRICKS, of Philadelphia, Pa.—*Improvement in Hulling Machines.*—Patent dated September 2, 1862.—This invention consists in the employment of two toothed hulling plates, one having a rotary motion, the other being stationary and provided with an elastic or yielding back, the rotary plate being so arranged as to be capable of being adjusted to regulate the pressure of the plates on the coffee, cotton seed, or grain, and using in connexion with the said hulling plates a fan and reciprocating screen within a case placed below the plates. Below the screen box is arranged a rotating toothed shaft of double taper form for the purpose of polishing the grain which passes from thence into a circular screen surrounded by a similar screen of larger diameter and of less length, so that the discharge opening of each shall be separate.

Claim —First, the two plates D D′, provided with teeth, as shown, one D′ being arranged to rotate on an adjustable shaft E, and the other D fitted permanently in the case C, with an elastic or yielding substance, formed of India-rubber or cork, interposed between it and the side or plate *a* of the case, as and for the purpose specified.

Second, in combination with the plates D D′, the blast fan N, and reciprocating screen O, placed within the box or case M, and arranged in relation with the plates D D′ to operate as and for the purpose herein set forth.

Third, the polisher or scourer formed by the rotating toothed shaft O′ placed within the box N′, in combination with the screen O, blast fan N, and plates D D′, arranged as and for the purpose specified.

Fourth, the rotating screens Q T, placed one within the other in the case R, in combination with the polisher O′, reciprocating screen O, blast fan N, hulling plates D D′, the latter being placed within the case C, and the plate D′, provided with the conical flanched feeder F projecting within the hopper B, and all arranged to operate as and for the purpose specified.

No. 36,351.—JOSEPH HOLLEN, of Fostoria, Pa.—*Improvement in Knitting Machines.*—Patent dated September 2, 1862.—This invention consists in the construction and arrangement of devices for lifting the stitches off of hooked needles, and giving the required periodical motions to the needle cylinder. Against the inner end of the cam cylinder is permanently fixed a plate which carries three levers, each of which turns freely and independently of the others, and is provided with a pointed end adapted to enter and move along in grooves in the needles, underrun the stitches thereon, lift them over their hooked ends, then drop them, as the cam cylinder is rotated. The cam cylinder has also a series of appropriate cams thereon, which successively move a forked plate to the left and right, and also downward against the lifting tendency of a spring N, so as to drive the needle cylinder around by two distinct motions for every stitch lifted off the needles.

Claim.—First, the stitch-lifting levers H H H arranged around the end of the cam cylinder *g*, so as to operate in combination with the needles C and presser E, substantially in the manner described for the purpose specified.

Second, giving to the needle cylinder B the periodical motions described, by means of the forked plate M, or its equivalent, operated by the cam cylinder *g* and spring N, substantially in the manner described for the purposes specified.

No. 36,352.—ALEXANDER IRWIN, of Pittsburg, Pa.—*Improvement in Engines for City Railroads.*—Patent dated September 2, 1862.—Suspended in a frame beneath the car bed are two oscillating engines, above each of which is a water tank placed underneath the seats of the car and divided into a number of compartments, through which pass valve rods provided with valves on each side of the partitions, the object being to prevent the accumulation of the water and consequent weight at one end when upon an inclined grade, and to insure a uniform supply to the boilers at the opposite end of the car bed.

To the inner ends of the tanks are attached inclined pendant tubes, extending down in front of the driving wheels and provided at their lower ends with perforated cross-pipes, for the purpose of supplying water to the treads of the wheels to facilitate their passage over curves.

Claim.—First, the oscillating engines F F in a frame E suspended underneath the car bed A, as shown, in combination with the heater K, tanks H H, and boilers G G, all arranged and disposed in relation with the car bed A to operate as and for the purpose herein set forth.

Second, constructing the tanks H with a series of compartments, in connexion with the valves J and rods I arranged therein, as shown, for the purpose specified.

Third, the sprinklers or jet discharges formed of the tubes L with perforated pipes *m* at their lower ends, when said tubes are connected and arranged with the tanks H and the wheels B, for the purpose herein set forth.

No. 36,353.—I. R. LAWRENCE, of Green Island, N. Y.—*Improvement in Endless-Chain*

Third, the frame A B attached rigidly to the stock and the frame E F G H attached to the

No. 36,353.—I. R. LAWRENCE, of Green Island, N. Y.—*Improvement in Endless-Chain Horse-Powers.*—Patent dated September 2, 1862.—This invention consists in the application of a semicircular outside guide for the endless chain at the end of the machine, the latter being so constructed that a link or roller can be taken from and replaced in the endless chain at either end by removing the semicircular guide, without the necessity of removing the guard rails or the horse from the machine, in case such link or roller should become broken or otherwise defective.

The axles which carry the rollers are made of taper form, and are cast on the links with their central lines parallel to the plane of the track, but inclined forward toward their line of motion, so as to prevent their tendency to bind against the track rails.

Claim.—The movable half circle or outside guide or guides G for the endless chain at the end of the machine, the machine being so constructed, substantially as herein described, that a lag B, link C, or roller D can be taken from and replaced in the endless chain at the circular end of the machine on removing the said half circle or outer guide or guides G, without taking either the guard rail or guard rails I or the horse or horses from the machine.

Also, the inclined tapered axles L cast on links C, combined together and with the rollers D, lags B, and tracks E F, substantially as herein described.

Also, the inclined tapered pivots N and corresponding sockets P cast in and upon links C, combined together and with lags B, rollers D, and supporting rail E F, substantially as herein described.

No. 36,354.—A. S. LYMAN, of New York, N. Y.—*Improved Apparatus for Concentrating Milk.*—Patent dated September 2, 1862.—This apparatus consists of a series of disks rotating in a continuous trough arranged within a passage, through which there is a circulation of air, the object being to expose the milk for evaporation by distributing it over a large surface in contact with a large amount of fresh air, and at the same time to break up or prevent the formation of a pellicle.

Claim.—The combination of the rotating disks *g g*, the continuous pan B, and the air passage *c*, substantially as and for the purpose herein specified.

No. 36,355.—ALEXANDER MOFFITT, of Brownsville, Pa.—*Improvement in Hubs for Vehicles.*—Patent dated September 2, 1862.—This invention consists in the arrangement and combination of the several devices named in the claim, by means of which the ends of the spokes are firmly secured, and the latter, when broken or injured, can be readily replaced without the aid of an artisan.

Claim.—First, the box *a*, in combination with the part *b* and parts *c d e*, with their appendages or flanges, substantially as described.

Second, the pins *p* and *q*, with their fastening screws *p'* and *q'*, in combination with the holes in the lips of the cup-shaped flanges *d'* and *f'*, as described.

Third, the screw nut *d* and flange *d'* for tightening the disk *c* and flange *c''* upon the ends of the spokes.

Fourth, the screw-nut *f*, with its flange *f'* and imperforate diaphragm *h*, constructed in the manner and for the purposes specified.

Fifth, the semi-elliptical or semi-oval mortise *c'* and *e'*, constructed in the manner and for the purposes set forth.

No. 36,356.—PROSPER MONNET, of Lyons, France.—*Improvement in producing Aniline Colors.*—Patent dated September 2, 1862.—This invention consists in treating salts of aniline or toluidine, such as the hydrochlorate of these substances, with nitro-benzine at a boiling temperature, and separating the red and blue colors by washing with pure water.

Claim.—The within-described process of treating the hydrochlorates or other salts of aniline or toluidine with nitro-benzine, substantially in the manner and for the purposes specified.

No. 36,357.—PROSPER MONNET, of Lyons, France.—*Improvement in the Manufacture of Aniline Colors.*—Patent dated September 2, 1862.—This invention consists in treating the red of aniline with methylene or wood spirit, and afterwards with nitric acid, until the color has changed from the red to a violet blue.

Claim.—The within described process of treating the red of aniline with methylene or wood spirit and nitric acid, substantially in the manner and for the purpose set forth.

No. 36,358.—JAMES NICHOLS, of Limestone, N. Y.—*Improvement in Magazine Fire-arms.*—Patent dated September 2, 1862.—This invention consists mainly in certain means applied to a fire-arm in combination with a many chambered cylinder, for the purpose of permitting and effecting the loading of the chamber with loose powder and bullets or shot from magazines attached to the barrel or fore stock of the arm in front of the cylinder.

Claim.—First, the powder charger Q, applied in combination with the rotating cylinder C and a magazine P, substantially as herein specified.

Second, the bullet-feeding machanism, consisting of the plunger S, double ratchet rod S', slide T, dog T', link 14 and lever U, the whole combined and applied to the fire-arm in combination with the magazine R, to operate substantially as herein specified.

Third, the frame A B attached rigidly to the stock and the frame E F G H attached to the barrel, fitted together and combined by means of a yoke G and cam I, applied and operated substantially as herein described, to produce a longitudinal movement of the barrel or stock, the one relatively to the other.

Fourth, combining the cylinder with the recoil shield by means of the zig-zag groove *h h i i* in the cylinder and the pin *j* in the recoil shield, such groove and pin serving both to stop the cylinder in its revolution, and to detach the cylinder from the barrel in the longitudinal movement of the latter, substantially as herein specified.

Fifth, the elbow lever N carrying the revolving dog *n*, and the cam I, applied in combination with each other and with the cam L, by which the longitudinal movement of the barrel is produced, substantially as and for the purpose herein specified.

No. 36,359.—ROBERT PORTER, of Philadelphia, Pa.—*Improved Sheet Metal Cans for Oils, Varnish, &c.*—Patent dated September 2, 1862.—This invention consists in placing the cork tube in or near the centre of the top plate and indenting the plate with narrow radial grooves, so as to slightly depress the same from the periphery to the centre of the top plate for the purpose of conducting the oil or other liquid to the orifice or cork tube.

Claim.—Providing a sheet-metal can with drain grooves *d d* in its top plate A, the said grooves leading directly from the periphery of the latter to its cork tube B, and the said plate being slightly raised toward its said tube, substantially as described and set forth and for the purposes specified.

No. 36,360.—J. C. OSGOOD, of Troy, N. Y.—*Improvement in Submarine Excavators.*—Patent dated September 2, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—First, an endless bucket or elevator dredging machine, which is arranged to swing wholly upon a crane and operated thereupon, and is capable of being raised and lowered upon said crane, substantially as and for the purposes set forth.

Second, the combination with adjustable inclined ways D, and the frame of the crane B of the device *o y*, or equivalent, substantially as and for the purposes set forth.

Third, so combining the bevel wheels M N and main upright of the crane with the shaft and pinion L, through which the power is transmitted from the engine to the machinery in the crane, that said crane may be made to articulate in any desired direction without affecting or varying the working relation of said bevel wheels with the said shaft and pinion, substantially as described.

Fourth, the construction and arrangement of the crane, substantially as specified, so that the endless chain of buckets or elevators shall stand and discharge at a point higher than any other part of the apparatus, for the purpose set forth.

Fifth, in combination with the endless chain of buckets the manner of hanging the shute or trough so that it will adjust itself by means of the bolt under the hopper and the small crane H, substantially as herein set forth.

Sixth, the manner of constructing the hopper with the reversing bottom in combination with the shute or trough, for the purpose set forth.

No. 36,361.—A. T. PECK, of Scott, N. Y.—*Improvement in Butter Tubs.*—Patent dated September 2, 1862.—This invention consists in constructing a wooden butter tub or firkin with a lining of mica.

Claim.—As an improved article of manufacture, a butter tub, firkin, or box, constructed of wood, and having a lining of mica, substantially as described.

No. 36,362.—N. W. PEEBLES, of Brunswick, Ohio.—*Improved Clothes-Wringing Machine.*—Patent dated September 2, 1862.—This invention consists in the employment of a single reversely curved metallic spring, extending across the machine and secured at its centre to the upper cross-piece, with its ends bearing immediately upon the journals of the pressure rollers.

Claim.—The single spring S, acting directly on the journals of the pressure roller B, constructed and arranged in combination with the frame A and pressure roller B, substantially as and for the purpose herein specified.

No. 36,363.—DAVID and JOHN PFOUTS, of Holmes County, Ohio.—*Improved Pricking Martingale for Preventing Horses and Mules from Throwing or Breaking Fences.*—Patent dated September 2, 1862.—This invention consists in applying a series of sharp-pointed pieces of metal or nails to the inner side of a martingale strap, for the purpose of preventing a horse from breaking down fences while wearing the same.

Claim.—The combination of said pricking breast strap and the straps E E, which hold the pricking breast strap to its place.

No. 36,364.—JOHN OESTERLING, of Wheeling, Va.—*Improvement in Snap Dragon.*—Patent dated September 2, 1862.—This invention consists in providing the slide of the dragon with diagonal slits, by means of which the opening and closing of the jaws are regulated so

as to permit the use of a very weak spring, such spring, through the light pressure it produces, preventing the glass from cracking, so that it may be readily placed in and taken out of the dragon without danger of breaking or bending the glass.

Claim.—The diagonal slits, as shown in figures 1, 4, 5, and 6, of the drawings, or the equivalents of said slits.

No. 36,365.—C. G. PUCKETT, of Cerro Gordo, Ind.—*Improvement in Drain Valves for Pumps.*—Patent dated September 2, 1862.—Upon the side of the pump stock is arranged a case through which passes a screw rod provided at its lower end with a valve or stopper of suitable material, and combined with a pipe projecting from the lower part of the pump stock and communicating with the interior of the same in such a manner that by means of the screw rod, the pipe can be opened and closed at will, and that when the pipe is open the water remaining in the pump is permitted to ooze out and thus prevented from freezing.

Claim.—The combination of the box *f*, screw valve rod *c*, valve *b*, and pipe *a*, with the pump stock A, in the manner herein shown and described.

No. 36,366.—S. S. PUTMAN, of Dorchester, Mass.—*Improved Curtain Fixture.*—Patent dated September 2, 1862.—In a cavity at one end of the curtain roller is placed a pivot provided with a shoulder which is caused by a coiled spring to press against the cap which carries the cord at the end of the roller, by which means sufficient friction is produced to hold the curtain in any position. Near the outer end of the pivot are cut teeth which engage with a pawl to prevent the pivot from turning when the curtain is being drawn down.

Claim.—The loose pivot *f* held in place upon the curtain rod by means of the flange *i* and cap H, and controlled in its motions by the concealed spring *g* and pawl *k*, the pawl engaging directly with the pivot or with a tooth attached thereto, substantially as set forth.

No. 36,367.—F. J. REBBECK and E. M. DAVIES, of Pittsburg, Pa.—*Improvement in Lamp Burners.*—Patent dated September 2, 1862.—This invention consists in exposing the upper part of the wick tube of a coal-oil lamp burner either by moving the same vertically or moving a case which encompasses it, one or more openings being made in the latter, and the former provided with a perforated cylinder which, when the burner is in use, serves to close the openings in the external case which encloses the wick tube; the object being to enable the wick to be trimmed and lighted without the necessity of removing the glass chimney or detaching any of the parts of the burner.

Claim.—The wick tube D, provided with a hollow perforated cylinder I, and encompassed by a case K having one or more openings *d* made in it, and provided with a flanch L to receive the case or deflector M and draught chimney N, when said parts are arranged to admit of the vertical sliding of either the wick tube or case so as to expose the upper end of the wick tube, when necessary, for the purpose of lighting or trimming the wick, and also to enclose fully the wick tube when the burner is in use, substantially as herein set forth.

No. 36,368.—MOSES REED, of St. Louis, Mo.—*Improved Composition for Cleaning Painted Wood Work, Stone, &c.*—Patent dated September 2, 1862.—The ingredients of which this composition consists are pulverized pumice stone, sal soda, and borax, to be used instead of soap, for the purpose of cleaning painted or stone work.

Claim.—The employment or use of a composition made of the ingredients above specified, mixed together in the manner and about in the proportions herein described.

No. 36,369.—BENJAMIN RICE, of Hastings, N. Y.—*Improvement in Attaching Thills to Axles.*—Patent dated September 2, 1862.—This invention consists in the employment of an eye of oblong elliptical form made at the end of the thill-iron, and with a steel bearing thereon, and also a loose box having a spring bearing against it to compensate for wear: the same being used in connexion with a steel connecting pin and Babbett-metal bearing fitted in the yielding box, by which means rattling and unnecessary play of the coupling is avoided.

Claim.—The employment of the oblong eye B in combination with the steel head *a*, loose box E, spring F, and pin C, in the manner herein shown and described.

No. 36,370.—L. D. ROBERTS, of Cleveland, Ohio.—*Improvement in Machines for Making Horseshoes.*—Patent dated September 2, 1862.—For an understanding of this invention reference must be had to the specification and drawings.

Claim.—First, the combination of the eccentric C, mandrel D, the primary and secondary arms L L″, when operating conjointly in the manner and for the purpose set forth.

Second, the cam lever N, rods *o o*, and spring M, in combination with the roller P and arms L L″, in the manner and for the purpose specified.

Third, the arrangement of the cams F F′, arms I and I′, in combination with the bar H, arm J, and sock-shaft K, and arms L L″, substantially as and for the purpose set forth.

Fourth, the jaws U U, springs V V, gauges S S′, and mandrel D on the eccentric C, when arranged to operate conjointly in the manner and for the purpose specified.

Fifth, the adjustable gauges S S′ with the movable slide *l* and adjustable clamps *x x*, operating conjointly with the mandrel D and jaws U U, as and for the purpose herein described.

Sixth, the cam G, lever *g* and spring *j*, in combination with the shears or cutter T, operating in the manner and for the purpose set forth.

No. 36,371.—J. W. SCHREIBER, of New York, N. Y.—*Improvement in Coal-Oil Lanterns.*—Patent dated September 2, 1862.—This invention consists in constructing the body of the lamp with an external rim or case of cylindrical form, and also with a polygonal or corrugated flanch of such diameter that it will fit within the external rim between it and the body of the lamp, and form circuitous air induction passages, through which the flame is supplied with air; the parts being used in connexion with a draught chimney encompassed at its upper part by a jacket, a space being left between it and the chimney to form a passage for the air and assist the draught of the chimney.

Claim.—The lamp A, provided with a cylindrical rim or case D, and a polygonal or corrugated flanch F, in combination with the chimney and the shirt or jacket K, on or around the upper part of the latter, all arranged as and for the purpose herein set forth.

No. 36,372.—CHARLES SEYMOUR, of Laporte, Ind.—*Improvement in Machines for Upsetting and Stretching Tires.*—Patent dated September 2, 1862.—This machine is composed of a sliding bed plate resting upon a stout frame, upon the rear end of which bed projects a rack which meshes with a toothed sector secured to jaws on the frame, by which the sliding bed is moved. Upon the sliding bed are placed eccentric wheels which hold the wheel tires, and midway between which is placed a stationary jaw having opposite to it a sliding or adjustable jaw, which together serve to assist in stretching or staving up the tire. The frame is also provided with a punch stock, which, in connexion with suitable dies and a punch operated by means of the toothed sector, serve to punch the holes in the tire.

Claim.—First, the frame B, sliding bed plate *c*, with its rack D, sector E, the stationary jaw J, and adjustable jaw K, when arranged to operate in combination with the eccentrics G G G, the said parts operating together in the manner and for the purpose set forth.

Second, in combination with frame B, sliding bed plate *c*, rack D, and sector E, the punch stock H, punch I, die stand F, and die N, when the several parts are arranged in the manner and for the purpose specified.

No. 36,373.—EDWARD SHORE, of Conshohocken, Pa.—*Improvement in Knitting Machines.*—Patent dated September 2, 1862.—This invention relates to an improvement in rotary knitting machines, and consists in driving the stripper wheel and, if desired, the loop wheel and landing wheel, by means of gearing from the main shaft of the machine, so that the circular row of knitting needles usually employed to turn the said wheels shall be relieved from that duty and from that undue strain which is liable to disarrange and, in many cases, break the needles.

Claim.—Driving the stripper wheel of a rotary knitting machine and, if desired, the landing and loop wheels, by means of gearing from the main shaft of the machine, substantially as herein set forth and for the purpose specified.

No. 36,374.—A. J. SIMPSON and J. B. CURRIER, of Lowell, Mass.—*Improvement in Lamp Burners.*—Patent dated September 2, 1862.—This invention consists in providing the flanch to which the chimney is attached with a pendent cylinder which encompasses the cone or deflector of the burner, and is fitted thereon in such a manner as to be allowed to rotate, the pendent cylinder being provided with an opening corresponding in size to a similar opening in the cone or deflector, and the two openings being made to coincide with each other by turning the flanch in one direction, so that the top of the wick tube may be exposed for lighting without the necessity of removing the chimney.

The chimney is secured to the flanch by means of curved slots and lips upon the latter.

Claim.—The flanch G having the cylinder F attached, the latter being fitted on the cone or deflector D, as shown, so that it may turn freely thereon, and at the same time be prevented from being casually detached, in combination with the two openings *g h*, made respectively in the cone and cylinder, all arranged as and for the purpose specified.

Also, providing the flanch G with two curved slots *e e* and lips *c c*, substantially as shown, for securing the chimney to the flanch, and at the same time admit of the expansion of the chimney under the heat of the flame, as set forth.

No. 36,375.—W. E. SMITH, of Port Washington, Pa.—*Improvement in Apparatus for Cleaning Wells.*—Patent dated September 2, 1862.—This invention consists in the employment of a box provided with a shovel or scraper and a gate, the box being attached to the lower end of a sectional shaft, so arranged as to enable a well to be cleaned without the necessity of a person descending the same for the purpose.

Claim.—The box A attached to the extension shaft E, and provided with the shovel or scraper F, spur I, and gate B, all combined and arranged to form a new and useful article or device, for the purpose specified.

No. 36,376.—ROBERT SPENCER, of Brooklyn, N. Y.—*Improved Harness Saddle.*—Patent dated September 2, 1862.—This saddle is constructed of two wooden bearings, connected at their upper ends by a metal spring underneath which is placed an elastic strip of wood, the upper surfaces of the wooden bearings being grooved so as to receive the covering of the saddle.

Claim.—The combinations with the bearings A A, when constructed of wood and covered with felt or other fabric, so as to do away with the usual method of stuffing, of the elastic metallic plate B, and the elastic strip C, or either of them, in the manner and for the purpose substantially as herein shown and described.

No. 36,377.—CHARLES H. WATERS, of Groton, Mass.—*Improvement in Looms for Weaving Wire Cloth.*—Patent dated September 2, 1862.—This invention consists in preparing the filling wire for each throw of the shuttle, that is to say, drawing off from the shuttle bobbin and straightening the required length for the shoot, when the shuttle is in its box, and holding the shoot of wire thus drawn off between surfaces, in such a manner as to prevent all twisting, kinking, or breaking, and at the same time to allow it to yield readily to the draught of the shuttle, thus relieving the shuttle in its transit from all drag in the wire other than what is necessary to draw the prepared shoot into the shed of the warp, the rendering of the wire from the bobbin being checked during the flight of the shuttle.

Claim.—First, the drawing off of a shoot of filling wire, while the shuttle is in its box, substantially as described.

Second, the holding of the shoot of filling wire, after it has been drawn from the bobbin, until it is drawn or thrown into the open shed of the warp by the shuttle, substantially as described.

Third, the use of the fly shuttle, in throwing a shoot of filling wire after it has been drawn and held, substantially as described.

No. 36,378.—SETH WHEELER, of Albany, N. Y.—*Improvement in Links for Horse-Powers.*—Patent dated September 2, 1862.—This invention consists in extending the studs or journals on the link far enough beyond the wheels to receive a supporting bar which extends from one stud or journal to the other, and is provided with a slot or opening to receive the outer end of the lag which passes through a slot or opening in the link, so that the weight or strain is equally distributed on both sides of the wheels.

Claim.—The supporting link E, or its equivalent, applied to the studs or journals C C′, for the purpose of distributing the weight or strain on both sides of the wheels D D′, substantially as and for the purpose specified.

No. 36,379.—S. A. WHEELOCK, of Charlton, Mass.—*Improvement in Churns.*—Patent dated September 2, 1862.—This invention consists in the employment of a gear wheel operated by a crank, and meshing with a pinion attached to a fly wheel, the latter being provided with a rod connecting with a lever to the free end of which is attached the churn dasher.

Claim.—The above described mode of operating churns, when constructed and operated in the manner and for the purposes as above set forth and described.

No. 36,380.—JOSEPH WHITE and ANGUS AGNEW, of Philadelphia, Pa.—*Improvement in Coal-Oil Lamps.*—Patent dated September 2, 1862.—This invention consists in the employment of a device for spreading the flame and consuming the smoke, so as to dispense with the usual glass chimney. It is composed of a bent plate having an elongated opening, from each end of which extends downwards an inclined strip to the top of the wick tube.

Claim.—The spreader, having in its top *a* an elongated opening and inclined or curved strips extending from the ends of the said opening to the upper edge of the wick tube, the whole being applied to the wick tube or cap of a coal-oil lamp, as set forth, for the purpose specified.

No. 36,381.—W. H. WILLARD, of Cleveland, Ohio.—*Improvement in Boots.*—Patent dated September 2, 1862.—This invention consists in attaching to the inside of a boot one or more pockets having a metallic lining and a lappel at the top, for the purpose of carrying money or other valuables.

Claim.—One or more pockets constructed and arranged as described, in combination with the boot, for the purpose specified.

No. 36,382.—A. I. AMBLER, of Milwaukie, Wis., assignor to Himself, R. N. AMBLER, and W. MARTIN, of the same place.—*Improvement in Car Coupling.*—Patent dated September 2, 1862.—The sockets of the draw-bar of each car are constructed with a slot extending around the front and both sides, so that the link may be inserted therein laterally as well as longitudinally. The shackle pin is provided at its lower end with a key to prevent its being accidentally withdrawn from the draw-bar. Each socket is provided with a link permanently secured by a smaller link through which passes a vertical bolt at the rear end of the socket. The draw-bars rest upon eccentrics placed upon transverse shafts secured to the under side of the frame, by means of which the draw-bars of cars, having platforms of different heights, may be readily adjusted to each other.

Claim.—First, providing the draw-bars A with sockets *b*, extending entirely through them from side to side, to admit of the lateral insertion of the link or shackle C, as and for the purpose herein set forth.

Second, the keys *d* fitted in the lower parts of the pin E, in combination with the slots *e* and recesses *f* in the draw-bars, as and for the purpose specified.

Third, the securing of the links or shackles C in the draw-bars A A by means of the links D and bolts C, when used in connexion with the sockets *b*, extending entirely through the draw-bars from side to side, as set forth.

Fourth, adjusting the draw-bars A vertically at their outer ends to suit cars or platforms of different heights by means of eccentrics, cranks, or their equivalents, placed on shafts, and having the draw-bars resting on them, and operating or turned by means of cranks or gearing, as set forth.

Fifth, the combination of the sockets *b*, links or shackles C, and pins E, all arranged in connexion with the draw-bars A, as and for the purpose set forth.

No. 36,383.—P. S. BOOTHBY, of Biddeford, Maine, assignor to J. W. BROOKS and WARREN SOULE, of the same place.—*Improved Fastening for Gaiter Boots.*—Patent dated September 2, 1862.—This invention consists in providing the boot at each side of the opening in front with a corded or raised edge sewed upon the edges. Upon these raised edges are fitted clasps connected by a link, and attached to a cord by means of a loop in such a manner as to allow the clasps to slide over the edges, so that by means of the cord the clasps may be pulled up, thus drawing the edges together and fastening the boot. By pulling down the clasps the boot becomes loosened.

Claim.—The clasp B, with its connecting link C, or its equivalent, to be used in connexion with the cords D and E, loop G, and corded or raised edges F F, constructed and arranged in the manner and for the purpose specified.

No. 36,384.—G. W. LOCKWOOD, of New York, N. Y., assignor to HORACE CARPENTER & Co., of the same place.—*Improvement in Skeleton Skirts.*—Patent dated September 2, 1862.—This invention consists in connecting a series of hoops that form the skirt, by means of two cords running each in zig-zag lines from top to bottom, for the purpose of giving the hoop an elasticity in the direction of its length.

Claim.—The arrangement of the cords C and D, relatively to each other and to the hoops, substantially as and so as to produce the effect above described.

No. 36,385.—FRANZ VESTER, of Pforzheim, Grand Duchy of Baden, assignor to CHARLES WAGNER, of New York, N. Y.—*Improved Device for Protecting the Soles of Boots and Shoes.*—Patent dated September 2, 1862.—This invention consists in the employment of thin pieces of hardened steel of any desired form fitted in corresponding recesses in the face of the leather sole, and connected by rivets to thin plates sunk in the inner side of the sole.

Claim.—The employment of the thin hardened plates or washers with rivets connecting them with the soles of boots and shoes, substantially in the manner and for the purpose set forth.

No. 36,386.—C. W. CAHOON, of Portland, Maine.—*Improvement in Lamps.*—Patent dated September 2, 1862.—This invention consists in combining together the wick-tube holder or head of the lamp and handle in such a manner that the body of the lamp is suspended from the lamp head when the lamp is carried, and that the handle and lamp head are both simultaneously attached to the body of the lamp by screwing the lamp head to the collar, which latter is attached to the neck of the lamp body. To the handle is secured a pivoted chimney holder, the handle forming a connexion between the said holder and lamp head, so that the three may be simultaneously attached to or detached from the lamp body. An adjustable chimney fastening is formed of a spring plate of V-form, its branches passing up on the inside and outside of the air screen, and perforated to fit upon a tongue which holds it in place.

Claim.—The combination of the lamp head and handle, substantially as set forth.

Also, the combination of the lamp head, handle, and vibratable chimney holder, fitted with chimney fastenings, substantially as set forth.

Also, the combination of the U-spring, chimney, fastening, and tongue, substantially as set forth.

Also, the combination of a corrugated air screen and deflector, substantially as set forth.

No. 36,387.—J. R. AGNEW, of Mercersburg, Pa.—*Improvement in School Globes.*—Patent dated September 9, 1862.—This invention consists in mounting two hemispheres in standards which slide in parallel planes towards or from each other in such a manner that, on separating the hemispheres, the several parts or lines marked on their inner and outer surfaces retain their relative position opposite to each other. Combined with a screw shank projecting from the lower end of the head in which the armed standards of the hemispheres slide is a primary pedestal provided with a series of screw sockets, in such a manner that one or more globes can be placed on the primary pedestal or taken from the same and returned to their original pedestals at pleasure. With the sliding armed standards are combined slotted swivel sockets, so that the globe can be turned freely in either direction.

Claim.—First, the arrangement of the armed sliding standards or supports D, in combination with the hemispheres A A′, constructed and operating substantially as and for the purpose shown and described.

Second, the arrangement of the primary pedestal F, provided with a series of screw sockets, in combination with the screw shank of the head C, and with the armed standards D and hemispheres A A′, constructed and operating substantially as and for the purpose set forth.

Third, the slotted swivel sockets *d*°, in combination with the head C°, constructed and operating substantially in the manner and for the purpose specified.

No. 36,388.—SARAH A. BALDWIN, of Waterbury, Conn.—*Improvement in Door Plates and Card Receivers.*—Patent dated September 9, 1862.—This invention consists in combining a door plate and slides with a card receiver and a clamp, arranged in such a manner that a visitor may be informed whether the occupant of a house is at home or not; and, in case of not being at home, admit of the card of the visitor being deposited within the receiver, so that the occupant may obtain a knowledge of the call when arriving at home.

Claim.—The combination of the door plate A, reversible slide B, and card receiver C, arranged substantially as and for the purpose herein set forth.

Also, the clamp D when applied to the door plate A, and used in connexion with the card receiver C for the purpose specified.

No. 36,389.—CORTLAND BALL, of Augusta, Mich.—*Improvement in Hammers.*—Patent dated September 9, 1862.—This device is composed of two parts; one part having a slotted offset serving as a jaw, through which the other is made to slide, and provided with a claw, the sliding piece having a hammer head at one end and a screwdriver at the other end. When the handles are pressed together the device will act as a wrench.

Claim.—The within-described tool as an article of manufacture, constructed and used as and for the purpose herein specified.

No, 36,390.—URIAH BILLINGS, of New Bedford, Mass.—*Improvement in Machines for Making Horseshoes.*—Patent dated September 9, 1862.—Within a suitable frame are arranged two shafts with their axes parallel with and perpendicular to a third shaft, the latter being provided with adjustable journals so as to be capable of being moved towards the two first named shafts. On each of the shafts are swaging rolls for imparting the proper variable thickness of a shoe blank to the bar of iron to be operated upon, and also to crease and groove the same. In the rear of the bite of the rolls is an adjustable stop, between which and the rolls is a movable buttress operated by a lever for the purpose of preventing the shoe blank from curling or bending laterally while being formed.

Claim.—An improved horseshoe blank former, or combination of the adjustable, swaging and creasing rolls I K L, and a movable buttress N, constructed and applied and arranged together, and with mechanism for operating them, substantially as hereinbefore described.

No. 36,391.—J. P. BLAKE, of Waterbury, Conn.—*Improvement in Making Sewing-Machine Needles.*—Patent dated September 9, 1862.—This invention consists in a method of making sewing-machine needles by machinery, which elongates the portion of the wire that forms the body of the needle, thus reducing it in diameter and extending it in length, so that the surface of the wire is worked into the body of the needle instead of being pared off and wasted.

Claim.—The method of making sewing-machine needles by machinery, which elongates the portion of the wire which is to form the body of the needle, thus reducing it in diameter and extending it in length, substantially as described.

No. 36,392.—J. P. BLAKE, of Waterbury, Conn.—*Improvement in Machinery for Making Sewing Machine Needles.*—Patent dated September 9, 1862.—The object of this invention is to provide the proper machinery for making the needles named in the above-mentioned patent; its construction and operation will be understood from the claim.

Claim.—The combination of rolls fitted with grooves alternately flat and octagonal, for the purpose of reducing the transverse dimensions of metal rods and elongating them in length, substantially as described.

Also, the combination of rolls, having a groove with an enlarged space of sufficient size to permit the but of the piece of metal whose dimensions are to be reduced to be introduced between the rolls with a gauge, which determines the longitudinal position of the rod or other piece of metal before the rolls begin to bite upon it, substantially as described.

Also, the combination of rolls grooved, substantially as described, with gauges to determine the positions of the rods of metal, and with guides which hold the rods edgewise when the rolls begin to act upon them.

No. 36,393.—J. S. BROWN, of Washington, D. C.—*Improvement in Addressing Letters.*—Patent dated September 9, 1862.—This invention consists in the use of separate transferable cards of address in connexion with envelopes or wrappers made sufficiently transparent upon their face, or a part of the same, to enable the address upon the card to be distinguished, whereby the same cards may be used a number of times by being returned to the person sending them.

Claim.—The envelopes made transparent or equivalently prepared, so as to receive and properly exhibit the cards of address, substantially as and for the purpose herein specified.

Also, the combination of the cards of address and the transparent or equivalent envelopes, substantially in the manner and for the purpose herein specified.

No. 36,394.—E. A. CONE, of Milford, Mich.—*Improved Clothes Pin.*—Patent dated September 9, 1862.—This invention is explained by the claim and engraving.

Claim.—Making clothes pins of two pieces of wood of the form herein specified, and two pieces of wire which serve the double purpose of holding the pieces A A together at a proper distance, and as springs to allow the two ends to open and close as described, the pin when finished having both ends fitted for the line in the manner specified.

No. 36,395.—FREDERICK DAYTON, of Watertown, and W. S. KELLY, of Waterbury, Conn.—*Improvement in Stereoscopes.*—Patent dated September 9, 1862.—This invention consists in applying a clock movement to a continuous sheet of stereotype pictures in such a manner that the latter will be operated and brought consecutively before the lenses and the movement of the sheet placed entirely under the control of the person using the apparatus, so that the sheet may be started and stopped at any time, and also be capable of being unwound during its operation without any special manipulation on the part of the operator other than simply applying the key to the proper roller on which the sheet is to be wound.

Claim.—First, a stereoscope case A, provided with a clock movement H and a continuous sheet B of stereoscopic pictures, so arranged that the sheet will be actuated or moved by the clock movement, and the pictures made to pass before the lenses of the case, substantially as set forth.

Second, the sliding bar E, arranged in the relation as shown with the journal *e* of the lower roller C of sheet B, and having one of the journals of the shaft *l* of the upper roller D fitted in it, whereby the pinion J on the shaft of roller D may be detached from the clock movement, so that the sheet B may be wound on the lower roller C by simply placing the key on the journal *e* of roller C, as set forth.

Third, the rod or stop K, in combination with the clock movement H, as and for the purpose specified.

No. 36,396.—HENRY DUNHAM, Jr., of Abington, Mass.—*Improvement in Machines for Sewing Soles to Boots and Shoes.*—Patent dated September 9, 1862.—This invention consists in the combination of a curved hooked needle and a last made with a concave bottom in order that the needle may work through the upper leather and the sole at or near their adjacent edges. The last holder is combined with its carrying plate in such a manner as to enable the former to be inclined or adjusted with respect to the latter as may be necessary from time to time to vary the position of the last in order to maintain the plane of the guide-wheel flanch tangentially to the curve of the bottom of the last. The guide-wheel is made with a flange similar to a car wheel, against which and the periphery of the said wheel the sole and the upper are borne while being sewed together. The needle and awl are both curved in the arc of a circle and carried respectively by two bent levers arranged side by side, and connected to shafts operated by cams to impart the necessary motions for forming the "chain stitch."

Claim.—The combination of the covered and hooked needle with the last, constructed with a concave bottom, the whole being substantially as described and represented.

Also, the combination of the last holder with its carrying plate, in such a manner as to enable the former to be inclined with respect to the latter, substantially in manner and as set forth.

Also, the above-described arrangement of the feeding mechanism with respect to the last-carrying plate supporter M, and the sewing mechanism.

Also, a curved awl and a curved hook needle, arranged and combined with a guide wheel G and a last having a concave bottom, the whole being in manner substantially as specified.

No. 36,397.—LOVETT EAMES, of Kalamazoo, Mich.—*Improved Hydraulic Apparatus.*—Pated dated September 9, 1862.—This invention relates to an automatic forcing apparatus which is intended for throwing water to great heights and for furnishing water to cities, towns, factories, &c., which may be situated above the level or source from which it is desired to obtain the supply.

Claim.—First, the piston J working in an upright cylinder A, and so constructed that it will be acted upon in its upward stroke by the force of a head of water, and then allowed to descend by virtue of its own gravity when the head is cut off, substantially as herein set forth.

Second, the water chest or divisional box E, arranged below the main piston J at the bottom of the body of the machine, and furnished with a double disk valve F, valve seats *f* and *c'*, and eduction chambers, substantially as herein set forth.

Third, controlling and regulating the passage of the spent water below the piston, through said piston, by means of a loaded plate valve H or its equivalent, substantially as herein set forth.

Fourth, cutting off the pressure under the piston and its loaded valve at the instant the water has exerted its maximum force upon the piston, by means substantially as herein set forth.

Fifth, arranging above the piston J a force pump, when this pump receives its power from, is connected to, and operates in combination with, the mechanism in the body of the machine, substantially as herein shown.

Sixth, the central equalizing chamber which is immediately above the double valve F, for regulating the flow of water to the piston J, at the commencement of its upward stroke, substantially as herein set forth.

Seventh, tripping the valve *k*, by means of the extension jointed levers *l l*, or their equivalents, as herein set forth.

Eighth, cutting off the supply of water to the chamber A previously to the tripping of valve *k* by means of rod K′ and double valve F, so that the double valve F can be driven firmly to its seats by the force of the head of water, essentially as set forth.

No. 36,398.—LOVETT EAMES, of Kalamazoo, Mich.—*Improved Water Engines.*—Patent dated September 9, 1862.—This invention consists in arranging at the side of a large cylinder of suitable capacity, and in which works a piston, a smaller cylinder which is open at both ends and supplied with a peculiar arrangement of valves and valve seats, and which communicates with the large cylinder by means of ports at or near the ends of the two cylinders, whereby both the valves of the smaller cylinder are caused to move at one and the same time and a space equal to the whole of one port kept open at all times.

Claim.—First, so constructing and applying valves to a water engine that they will control both ports, and keep a space equal to the whole of one part open all the time, essentially as herein described.

Second, the solid double-laced valves L L′, in the cylinder G, valve seats *h h′*, *i i′*, and ports *g g′*, arranged and combined with the cylinder A and its piston E, substantially as and for the purposes herein set forth.

No. 36,399.—R. B. FITTS, of Philadelphia, Pa.—*Improvement in Treating Night Soil.*—Patent dated September 9, 1862.—This invention consists in separating from the watery portion of night soil most of the phosphoric acid and ammonia, by precipitating them chemically and mechanically with the more solid portions, running off the superfluous water and then mixing the residue with an additional portion of the charcoal and sulphate of lime in connexion with about one per cent. (of the night soil) of chloride of sodium or common salt, into a thoroughly mixed semi-fluid condition, and finally putting it up in this condition in tight barrels for transportation and subsequent use for agricultural purposes.

Claim.—The method or process of treating and putting up night soil for transportation and agricultural purposes, substantially as described.

No. 36,400.—LOUIS FRIESE, of Stuttgart, Germany.—*Improvement in Riding Saddles.*—Patent dated September 9, 1862.—Each side of the frame of the saddle-tree is formed of a front plate, central connecting link and back plate, which are connected to each other by means of hinges. The several plates and links are made of thin sheet metal and the two sides of the frame are connected in front by a bow and in the rear by the cantel, all so arranged as to allow the parts to readily adapt themselves to the body of the horse.

Claim.—The combination of the hinged links C, plates B D, bow E, and cantel F, in the manner herein shown and described.

No. 36,401.—G. P. GANSTER, of New York, N. Y.—*Improvement in Breech-loading Ordnance.*—Patent dated September 9, 1862.—This invention consists in applying to a cannon an eccentric breech-pin attached at one side of the centre of the breech, so that when half turned, an aperture in the breech-pin through which the charge is inserted is brought in line with the bore of the cannon.

Claim.—The eccentric breech-pin B, constructed and operating substantially as described.

No. 36,402.—R. J. GATLING, of Indianapolis, Ind.—*Improved Steam Marine Ram, &c.*—Patent dated September 9, 1862.—This invention consists in placing the ribs side by side and touching each other from bow to stern, and also the upper and lower deck transverse frame and vertical timbers, so as to combine great strength and capacity of resisting concussion. The bow head is composed of a solid mass of timbers keyed and bolted firmly together and covered with a series of curved and pointed metal shields, the vessel being designed to act as a "ram."

Claim.—First, arranging and combining the ribs *b b* and transverse frame timbers *c* and *d*, and vertical frame timbers *l*, side by side, so as to form continuous bearings against each other, anteriorly and posteriorly, the same being halved or dovetailed together at their crossing, which arrangement allows the lower parts of the rib timbers to rest on and form a crotchet over the keel, as shown in Fig. 3.

Second, the V or crotchet shaped metal bow shields *f f f f f f f*, constructed, arranged, and combined substantially as described for the uses and purposes set forth.

No. 36,403.—C. W. GRANNIS, of Gowanda, N. Y.—*Improved Condenser for Coal-Oil Stills.*—Patent dated September 9, 1862.—This invention consists of a condenser formed with sloping sides in the form of a roof which is placed upon a cauldron or kettle and provided with an internal flange or trough for conducting off the condensed vapors to an external conductor. Over the condenser is arranged a water pipe provided with perforations on its under side for the purpose of throwing water upon the outside of the condenser and aid the process of condensation.

Claim.—A condenser which combines, first, sloping sides.

Second, an internal trough to catch and conduct the condensed vapors to an external conductor.

Third, an external spout or conductor passing through or in a trough of cold water, to conduct the condensed vapors to the warm or cooler.

Fourth, jets of water or a body of cold water upon its outside, in combination with a caldron or still having a broad open top, upon which the condenser is fitted, forming a cover thereto, so that the vapors arising from the entire surface of the oil in the still may pass directly to the condenser, substantially as described.

No. 36,404.—J. S. GRAY, of New York, N. Y.—*Improvement in Self-generating Vapor Burners.*—Patent dated September 9, 1862.—This invention relates to that class of burners in which the jet is situated at a distance from the reservoir which contains the fluid, in order to guard against the danger of explosions, and the improvement consists in the arrangement of the parts named in the claim and shown by the engraving.

Claim.—The combination of a wick tube, a heater cap, a conductor, a jet and a mixing tube, when arranged and operating substantially in the manner herein described.

Also, the combination of a jet, a mixing tube, and an adjustment screw, when arranged and operating as described, for the purpose of regulating the relative proportions of air and vapor admitted to the burner, as set forth.

No. 36,405.—W. O. GROVER, of West Roxbury, Mass.—*Improvement in Sewing Machines.*—Patent dated September 9, 1862.—This invention relates to certain devices applicable only to machines using what is termed the Grover & Baker, or double-thread loop stitch, and consists in certain mechanism for actuating the thread carrier, and in combining the same with an assistant looper. A device is also used which may be applied to other varieties of sewing machines, and consists in certain apparatus for governing the upper thread in its passage from the bobbin to the needle.

Claim.—First, giving a vibrating motion to a thread carrier, in directions perpendicular to its advancing and retreating motions, or nearly so, by means of a revolving surface, inclined to a revolving shaft, the thread carrier stock being forced against that surface, and the contrivance acting substantially as specified.

Second, giving four motions to a thread carrier by means of an inclined revolving surface, a pin or sleeve, and a pivot, the whole either acting on the stock or controlling its motions, substantially as specified.

Third, in combination with a thread carrier having four motions, a stationary assistant looper, substantially such as described, the two acting in combination, substantially in the manner set forth.

And, lastly, in combination a vibrating thread tension, a stationary thread tension, and an eye or leader on a needle arm, when the three are relatively arranged and act in combination, substantially as described, for the purposes specified.

No. 36,406.—ROBERT HAERING, of New York, N. Y.—*Improved Composition Substitute for Horn, Hard Rubber, &c.*—Patent dated September 9, 1862.—By treating linseed oil with protochloride of sulphur, a peculiar elastic gummy substance is obtained. This invention consists in compounding and masticating this substance with asphalt, and with small quantities of gutta-percha and sulphur, and rolling, moulding, or otherwise forming the compound into suitable forms, and subjecting it to heat.

Claim.—The composition made by mixing the changed linseed oil with asphalt, sulphur, and gutta-percha, in the manner and in about the proportions herein specified.

No. 36,407.—JOHN HARDICK and C. B. HARDICK, of Brooklyn, N. Y.—*Improvement in Valves for Steam Engines.*—Patent dated September 9, 1862.—This invention consists in the employment of a stationary piston in a cylinder formed upon or attached to the main valve, and receiving steam from a suitable secondary valve, by means of which the valve is caused to move and admit steam on the opposite side of the engine piston. Concussion upon the main valve is prevented by means of a cushion of steam confined in an annular space formed by a head or disk secured to the end of the piston rod.

Claim.—The stationary piston *g*, in combination with the cylinder *e*, formed with or attached to the valve *b*, substantially as and for the purposes specified.

Also, the disks *k k* and annular recesses *l l*, in combination with the said valve *b* and cylinder *e*, to cushion the valve and prevent concussion, as set forth.

No. 36,408.—SAMUEL HORSLEY and E. H. JONES, of Liverpool, England.—*Improved Apparatus for Cleaning and Polishing Boots and Shoes.*—Patent dated September 9, 1862.—This invention consists in the construction of an apparatus for supplying blacking, paste, or powder to a pair of rotary brushes, by means of disks or rollers, which freely revolve on spindles provided with crank levers, so arranged that the disks or rollers can be brought to bear upon and support the brushes, and, after providing them with a supply of the paste or powder, be automatically removed from contact with the same.

Claim.—The combination with the rotary brushes or buffers *h* and *i* of the disks or rollers *n* and fulcrum and crank-lever spindles *o* and *p*, for supplying the cleaning substance or blacking from the troughs or receptacles *l*, substantially as herein described.

No. 33,409.—ALBERT JOHNSON, of Putnam, Conn.—*Improvement in Water Elevators.*—Patent dated September 9, 1862.—This invention consists in the employment of a crank box fitted loosely upon the main shaft, and enclosing a wheel which is secured to the said shaft. This box contains a pawl and ratchet and a slide, which latter is kept in contact with the periphery of the wheel by means of a spring, so as to serve as a brake. Attached to the slide is a bar, the opposite end of which is fitted upon a pin connected with a small pulley fitted upon a shaft passing through the crank box, so that the latter is readily detached from the shaft, and allowed to descend by its own gravity.

Claim.—The crank box E placed loosely on the shaft C, and provided with the slide or brake H, spring I, pulley *e*, and bar L, in connexion with the wheel D, attached permanently to the shaft C, and placed within the crank box, all being arranged to operate substantially as and for the purpose set forth.

Further, the graduating of the pressure of the slide or brake H on the wheel D, by means of the bar J, adjusted by the screw K, so as to regulate the strength of the spring I, but this only when used in combination with the crank box E and the mechanism contained within it, for the purpose specified.

No. 36,410.—E. B. JUCKET, of New Haven, Conn.—*Improvement in Hose Coupling.*—Patent dated September 9, 1862.—This invention consists in the employment of a ring cut open at one part of its circumference, so as to allow it to expand and slip over the hose, and made tapering upon its outer side, over which is screwed a nut having a corresponding taper on its inner side, by means of which the ring is contracted around the hose, so as to bind it firmly upon the coupling.

Claim.—The conical screw ring D and nut E, constructed substantially as described, in combination with hose couplings, in the manner and for the purpose substantially as herein set forth.

No. 36,411.—C. W. T. KRAUSCH, of Chicago, Ill.—*Improvement in Engine Indicators.*—Patent dated September 9, 1862.—This invention consists in the employment of a traversing paper or other suitable material prepared with longitudinal lines, and attached to an endless belt so operated as to receive a motion corresponding to the progress of the engine, and used in connexion with markers that communicate with the several working parts of the engine, so as to indicate upon the record sheet the variation of speed of the engine, the amount and variation of the load, the amount of opening of the throttle valve and degree of expansion, and such other conditions of the engine as may be desirable to be cognizant of during its operation.

Claim.—The indicator and recorder, constructed and operated substantially as described, for the purpose of making a combined record of the performances of an engine.

No. 36,412.—JACOB KRITSCH, of Binghamton, N. Y.—*Improvement in Securing Boxes to Wheel Hubs, &c.*—Patent dated September 9, 1862.—This invention consists in providing the hub box, which passes through the whole length of the hub, with a screw thread, so that the box may be screwed tightly into the hub, and thereby securely held. The ends of the spokes rest immediately upon the screw thread of the box, and assist in securing it in place. The hub box is widened near its inner end into a broad flange, through which and the "moon plate" are passed short screw bolts, so as to hold the axle in the box of the hub.

Claim.—The arrangement of the perforated flanch *d* with the screw bolts passing through it, in combination with the screw *c* upon the exterior of the box B, so that by unscrewing the box access may be had to the inside of the flanch, for the insertion or removal of the screw bolts, as herein shown and described, for the purpose set forth.

No. 36,413.—WILLIAM KUEBLER and HENRY BEIERLEIN, of Philadelphia, Pa.—*Improvement in Lamps.*—Patent dated September 9, 1862.—The nature and object of this invention are explained by the claim and engraving.

Claim.—The described burner for coal-oil lamps without a chimney, in which the gas-condensing chamber *d* is provided with an internal bottom flange *g*, the position of *g* and its proportionate size of opening being in relation to the wick, arranged as set forth.

Also, the slitted gas condenser *d*, combining with the internal bottom flange *g*, the slitted top as set forth, when the slit *l* is shaped and situated in relation to the slit *v* in the draught chamber *e*, as herein set forth.

No. 36,414.—G. T. LEWIS, of Philadelphia, Pa.—*Improvement in the Preparation of White Oxide of Zinc for use in Paints.*—Patent dated September 9, 1862.—This invention consists in subjecting the white oxide of zinc in its dry state to the combined action of friction and pressure, by which means its bulk is greatly reduced, and it is enabled to be ground with a much smaller quantity of oil, thereby causing it to have greater body.

Claim.—The preparation of white oxide of zinc for the manufacture of paint, by subjecting it to the combined action of friction and pressure, substantially as herein described, whereby its density is increased, and the paint caused to have greater "body."

No. 36,415.—ADOLPHUS LIND, of San Francisco, Cal.—*Improvement in Water Wheels.*—Patent dated September 9, 1862.—This invention consists in placing buckets upon the periphery of a drum which is fitted within a cylindrical case, and used in connexion with a cylindrical abutment placed in contact with the drum, and provided with recesses to receive the buckets of the wheel; the abutment being also placed within a case, and the parts being arranged with a view to admit of the ready discharge of the water after acting upon the wheel, so that the latter will not be retarded in its movement, or have its efficiency diminished by carrying the water when its velocity diminishes.

Claim.—The employment of two sets of buckets *c c d d* and separating flange C, in combination with the drum A and the drum E, recessed to receive said buckets; the said parts being arranged and operating together in the manner herein shown and described.

No. 36,416.—R. J. MARCHER, of New York, N. Y.—*Improved Device for Cutting UP Composition Ornaments used for Picture and Mirror Frames, Architectural Purposes, &c.*—Patent dated September 9, 1862.—This invention consists in the employment of a knife-stock composed of two parallel side pieces connected by transverse bars and a screw rod, the knife being fitted in the stock, and so arranged as to cut off from the base or bed of the composition upon which ornaments used for picture or mirror frames, &c., are formed in *basso relievo* by moulds.

Claim.—The stock A, formed of two side pieces *a a*, connected by rods *b*, or their equivalents, and provided with a screw rod B and thumb nut C, in connexion with the knife or planer D, fitted in the stock A, substantially as shown and described, and all arranged to be used with or applied to the bed or base of the ornament, for the purpose herein set forth.

No. 36,417.—C. B. MATTHEWS, of Oquawka, Ill.—*Improvement in Lamp Burners.*—Patent dated September 9, 1862.—This invention consists in the employment, in connexion with a lamp top and chimney, of a clamp constructed of a wire bent so as to form a coiled spring and two semicircular jaws, the free ends of which terminate in eyes which may be readily grasped by the finger and thumb, so as to expand them, and allow them to be removed from the flange of the lamp chimney upon which they are fitted. The wick fork or spur-wheel shaft is mounted upon an elastic bar, bent at its lower end, and secured to the wick tube at the bottom of the burner, so as to keep it in contact with the wick, and admit of its adaptation to wicks of different thicknesses.

Claim.—The arrangement of the spring D with the lamp top A, cone C, and chimney E, in the manner herein shown and described, so that the said spring will adjust itself, both vertically or laterally, to the chimney, and press the chimney with a yielding pressure in both directions, all as set forth.

Also, having the wick or spur-wheel shaft mounted upon a spring, in the manner and for the purpose herein shown and described.

No. 36,418.—I. F. MAYNARD, of Nashua, N. H.—*Improvement in Spinning Fliers.*—Patent dated September 9, 1862.—This invention relates to a method of attaching the flier to the wheel or cog gearing by means of an interlocking device formed by turning a true circular tenon upon the end of the whirl or on the gear wheel, and then forming upon the same two shoulders, over which is placed the collar of the flier, with corresponding shoulders, so as to fit one within the other.

Claim.—The construction of a roving or spinning flier formed with an interlocking base or pedestal collar *f f g g*, and provided with a keying or interlocking tenon *d e d e*, and whirl C2 C2, or a gear connexion C C, substantially as herein described, and as fully exhibited in the accompanying Figures 1, 2, 3, 4, 5, 6, 7, 8.

No. 36,419.—ANTONIO MEUCCI, of Clifton, N. Y.—*Improvement in Treating Petroleum and other Oils to Produce a Vehicle for Paints and Varnishes.*—Patent dated September 9, 1862.—This invention consists in rendering petroleum and kerosene oil, or other hydrocarbon liquids, fit to be used in paints, by the introduction of a current of oxygen gas, or of any other gas or liquid containing oxygen, and capable of parting with the same. With the petroleum, kerosene, or other oils, after they have been treated with hyponitric gas, is mixed an extract of the cakes obtained in the manufacture of linseed oil, together with a certain quantity of fish oil, for the purpose of giving to the said liquids the required consistency for painting purposes.

Claim.—First, the employment or use of hyponitric acid in treating petroleum, kerosene, or other oils, substantially in the manner and for the purpose described.

Second, mixing petroleum or other oils, after they have been exposed to a current of hyponitric acid as described, with linseed or with linseed "cakes" and fish oil, substantially in the manner and about in the proportions herein specified.

No. 36,420.—T. V. NICHOLS, of Olena, Ill.—*Improved Hedge-Trimming Device.*—Patent dated September 9, 1862.—This invention consists in the employment of a horizontal cylinder having knives attached to it parallel with its axis, and also provided at each end with a radial projecting knife, the cylinder being placed upon a frame mounted upon wheels, and

operated by the draught movement of the machine, so as to trim the tops and sides of a hedge at one operation.

Claim.—The horizontal knives *c* of cylinder K, for cutting or trimming the top surface of the hedge, in combination with the knives *d d* attached to the ends or disks *b b* of the cylinder, for trimming the sides of the hedge, said cylinder being connected to a shaft I placed on a mounted frame A, and driven from the wheel B thereof, substantially as described.

No. 36,421.—M. T. RIDOUT, of Milwaukie, Wis.—*Improvement in Padlocks.*—Patent dated September 9, 1862.—This invention consists in a combination and arrangement of parts named in the claim, for a proper understanding of which reference to the specification and drawings will be necessary.

Claim.—The combination of the bolt D with the spring *s*, the angular stud, the tumbler *d*, and the mainspring *g*, substantially in the manner and for the purpose herein set forth.

Also, the arrangement of the tumbler *f* with the keyhole cover *a*, the cam *b*, the spring-catch *i*, the stop *k*, and the bolt D, or its equivalents of said parts, substantially in the manner and for the purpose herein set forth.

Also, the arrangement of the curved guard plate *h* with the tumbler *f*, the spring-catch *i*, and key pivot *q*, substantially in the manner herein set forth.

No. 36,422.—E. S. RITCHIE, of Brookline, Mass.—*Improvement in Mariners' Compasses.*—Patent dated September 9, 1862.—This invention consists in the employment of an air-tight vessel for containing air placed upon a pivot within a reservoir containing any suitable liquid. Within the air-vessel are secured two parallel magnets, and upon its upper surface is a card with the proper compass marks upon it; the object being to protect the magnets against oxydation, and also serve to buoy the card and magnets, so as to bring less weight upon the pivot.

Claim.—The arrangement and combination of the air-vessel E with the magnet or magnets G.

Also, the combination of the said air-vessel and magnet or magnets with the cards D, the same being for the purposes as specified.

No. 36,423.—JOHN ROBINSON, of New Wilmington, Pa.—*Improvement in Machine for Holding Open Bags and Sacks.*—Patent dated September 9, 1862.—This device is composed of two curved arms pivoted at their inner ends to a bar or handle, which is attached to and allowed a vertical movement within a slotted standard. The outer ends of the curved arms overlap each other, so that when the upper end of a bag is placed upon them they may be spread apart and caused to hold the bag in proper position to be filled.

Claim.—The bag-holder, constructed substantially as described, of the arms *h h'* pivoted to a handle *d*, projecting from a standard *b*, whether so arranged as to be adjustable to any height or not.

No. 36,424.—S. J. SEELY, of Brooklyn, N. Y.—*Improvement in the Manufacture of Corrugated Plates.*—Patent dated September 9, 1862.—This invention is explained by the claim.

Claim.—Making corrugated iron plates for ships' armor, or other purposes, when, by reason of the irregularity of form or the thickness of metal required, such plates cannot be produced by rolling wrought-iron, by first casting said plates, and then subjecting them to the process required to change them to the condition known and distinguished as malleable iron.

No. 36,425.—J. S. SWAN, of Mongaup Valley, N. Y.—*Improvement in Holdbacks for Wheeled Vehicles.*—Patent dated September 9, 1862.—This invention consists in pivoting to the truck frame or perch of a vehicle two levers, in combination with two lines or chains, one of which is connected to a hinged segment so as to enable the levers to be raised from the ground, and the other is connected with the harness in such a manner that, in going up hill, one of the levers may be lowered so as to prevent a retrograde motion of the vehicle; or the other may be lowered at any time to prevent a forward motion when desired.

Claim.—The arrangement of the levers F F' and slides *b b'*, in combination with the cords or chains *d e*, all applied to a wheeled vehicle, and operating in the manner shown and described.

No. 36,426.—J. H. SHIREMAN, of East Berlin, Pa.—*Improvement in Horse Rakes.*—Patent dated September 9, 1862.—This invention consists in the employment of a hand lever placed under the control of the driver, and so connected with the axle and an inclined way as to enable the driver readily to raise the teeth and to discharge the hay collected thereon, and also force the teeth down to their work.

Claim.—First, suspending the hand lever N upon the axle B, so that the former may articulate upon the latter in the manner and for the purpose described.

Second, the inclined "way" *k*, in combination with the hand lever N, arranged and operating substantially in the manner and for the purpose set forth.

Third, the perforated bar T, in combination with the hand lever N and inclined "way" *k*, substantially in the manner and for the purpose set forth.

No. 36,427.—JOHN SHAFFER, of Lancaster, Pa.—*Improvement in Constructing and Attaching Iron Panels to Wooden Frames.*—Patent dated September 9, 1862.—This invention consists in making metallic panels, with rods or lugs attached to their upper and lower edges, for the purpose of securing them within wooden stiles or frames of doors, window shutters, &c.

Claim.—The manner of making metallic panels with rods or lugs *a* attached, and inserting them into wooden stiles, drawn together and held in place by means of burs or screws *b*, substantially as set forth for the purpose specified.

No. 36,428.—J. H. TANNER, of Frauenfield, Switzerland.—*For Machine for Folding and Stitching Paper.*—Patent dated September 9, 1862.—This invention consists in the arrangements of a stitching device and pressing or smoothing rollers, and of a series of folding blades, in such a manner that a piece of thread is drawn through each sheet of paper before the last fold is completed, and that when completely folded each sheet is passed by the action of a pair of take-off rollers through the smoothing and pressing rollers, from which it is discharged ready for the binder.

Claim—First, the arrangement of the elastic bands *e*2, *e*5, and clasps *e*6, or their equivalents, in combination with the folding blades, as and for the purpose specified.

Second, the combination of a stitching device with the folding mechanism.

Third, the arrangement of the shears *k* and nippers *l*, in combination with the stitching and folding mechanism, substantially as and for the purpose specified.

Fourth, the employment of the vibrating notched lever *k'* and curved slotted plate *k*3, as described, for the purpose of operating the shears.

Fifth, the arrangement of the sliding clasp *l*2, in combination with the spring jaws of the nippers *l*, bracket *l'*, and cross-bar *l*3, substantially as specified, for the purpose of opening and closing the nippers at the desired intervals.

No. 36,429.—HIRAM TUCKER, of Newton, Mass.—*Improved Bed Bottom.*—Patent dated September 9, 1862.—This device is constructed with flexible slats, extending lengthwise of the bedstead and made fast at the foot end, and capable of a free movement, to a certain extent, in the direction of their length, but not vertically at the head end; between the middle of their length and the foot of the slats is a traverse brace upon which the slats rest, so as to give them an undulating form and allow them to conform to the outline of the body.

Claim.—The undulating bed bottom, constructed and operating substantially as described.

No. 36,430.—WILLIAM VAN ANDEN, of Poughkeepsie, N. Y.—*Improvement in Harvesters.*—Patent dated September 9, 1862.—The nature of this invention will be understood from the claim.

Claim.—First, making a section of the side rail of the frame next to the cutter and in front of the axle adjustable by connecting the same to the end of the stationary part of the rail by a centre pin, so that when its lower end is disengaged from the end of the front rail of the frame it may rotate on the centre pin, substantially as hereinbefore described and for the purposes set forth.

Second, the combination of the cutter bed (with the cutter bar working thereon) with the adjustable section of the side rail, substantially as hereinbefore described and for the purposes set forth.

Third, the combination of the propeller wheel on the side next to the cutter, of a two-wheel mowing machine, with a frame having an oscillating motion transversely of the path of the machine when the said wheel is arranged on the outside of the side rail of the oscillating frame, substantially as hereinbefore described.

Fourth, the use of the solid or fixed knife-edge bearing or shoulder formation on the propelling wheel axle, as a bearing on which to balance the frame of the machine and prevent it from slipping from side to side thereon, in combination with the said frame, and bearing *d*2 of the main driving-gear wheel F, substantially as hereinbefore described and for the purposes set forth.

Fifth, the combination of the cutter bar elevator lever, with the back end of the flooring or table and frame of the machine, behind the axle of the propelling wheels, substantially as hereinbefore described and for the purposes set forth.

Sixth, the method of making an adjustable-spring driver's seat, in combination with the fixed or solid standard or spring stiffener projecting upward from the back edge of the table or flooring, substantially as hereinbefore described and for the purposes set forth.

Seventh, the combination of the self-adjustable compensating pole with a frame having an oscillating motion transversely of the path of the machine and drag chain, arranged and operating as hereinbefore described and for the purposes set forth.

Eighth, the use of the adjustable staple for locking the drag chain, in combination with a self-adjustable compensating pole and drag chain attached to an oscillating mower frame, substantially as hereinbefore described and for the purposes set forth.

Ninth, the arrangement of the cutter bar of a mower frame having an oscillating motion transversely of the path of the machine and two propelling wheels, so as to operate forward of the axle of said propelling wheels, substantially as hereinbefore set forth.

No. 36,431.—JOHN VIAL, of Cleveland, Ohio.—*Improved Pump for Low-Pressure Steam Engines.*—Patent dated September 9, 1862.—This invention consists in so constructing and arranging the several parts of the pump as to cause a constant flow of water through the exit pipe, while the piston is rising throughout its whole upper stroke, and is designed to avoid, in this class of pumps, the concussion caused by the water reaching and reacting upon the head of the cylinder at the moment the piston head is at its greatest speed.

Claim.—The cylinder B, plunger H, and piston head F, in combination with the valves D G M, and induction pipe A and exit pipe L, these several parts being arranged and operating as and for the purpose specified.

No. 36,432.—L. F. WHITNEY, of Charlestown, Mass.—*Improvement in Rails for Street Railroads.*—Patent dated September 9, 1862.—This invention consists in the construction of a rail having a continuous bearing for the car wheel, with enlargements or excrescences on its upper part, at short intervals, which are so placed and bear such a relation in size and height to the depth of the groove in which the flanch of the car wheel runs, that the periphery of the wheel of a carriage will strike on one of the enlargements and rise over the rail when it is desired to direct it off the track.

Claim.—The tread rib *f*, in combination with the shoulder *b*, and equidistant laterally protruding knobs, substantially as shown and described.

No. 36,433.—M. A. WINHAM, of North San Juan, Cal.—*Improvement in Hose Couplings.*—Patent dated September 9, 1862.—This invention consists in the employment of clevises, hooks, or stirrups hinged or pivoted to one of the half couplings, in combination with lugs or noses, which are attached to the other half coupling in such a manner that by forcing the stirrups down over the lugs the two half couplings are drawn tightly together, thereby producing a close joint which is easily made and unmade.

Claim.—The employment, for the purpose of fastening hose couplings, of two or more hinged stirrups B, in combination with the wedge-shaped noses *b*, constructed and operating substantially in the manner herein set forth.

No. 36,434.—J. W. WOOLSEY, of Niles, Mich.—*Improvement in Potato Diggers.*—Patent dated September 9, 1862.—This invention consists in the employment of a double mould board formed of slats and provided with a front piece or coulter with shanks or wings attached, the slats being constructed and arranged in such a manner as to facilitate the passage of the earth between them, and at the same time throw the potatoes out of the hills and to either side of them, as the implement is drawn along.

Claim.—The standard C, shanks or wings E E, and bar F, in connexion with the slats G, of flat, oval, or any approximate form attached edgewise to the standard C and bar F, to operate as and for the purpose herein set forth.

Also, separately, the flat, oval-shaped slats G, when attached edgewise to the parts which support them, to operate as and for the purpose specified.

No. 36,435.—BENJAMIN ZURN, of New York, N. Y.—*Improved Sawing Machine, adapted for the use of the Auger and Chisel.*—Patent dated September 9, 1862.—The object of this invention is to combine a sawing machine which will be capable of slitting work or resawing and sawing scroll work, with a mortising machine and a boring device, the parts being so arranged that by a slight adjustment the machine may be used in any of the capacities above stated.

Claim.—The adjustable or sliding head C, in combination with the bar D and the spring L, connected to the saw slides P Q, the saw being driven from the shaft T, substantially as described, and all arranged to operate as and for the purpose set forth.

No. 36,436.—ELIJAH BARTON, of East Hampton, Conn., assignor to A. B. WHITE and J. W. BARTON, of the same place.—*Improved Alarm Bell for Doors.*—Patent dated September 9, 1862.—This invention consists in attaching the hammer directly to the stock or arm of the bell by means of a spring, the hammer having such a relative position with the door and the bell as to be directly acted upon by the opening of the door and forced back in contact with the bell, to sound the alarm when the door passes it.

Claim.—An alarm door bell composed of a bell A, having a spring D with a hammer E attached, secured to its arm or support B, substantially as shown and described.

No. 36,437.—BETHUEL KEITH, ADOLPH BEHR, and N. S. KEITH, of New York, N. Y.—*Improved Process of Calcining Ores and Minerals.*—Patent dated September 9, 1862.—The inventors say: "The nature of our invention consists in introducing into, with, and through a flame, the materials to be oxydized or formed into globules, in a minutely divided state and perfectly diffused through the air which is introduced therewith, in quantities sufficient to support combustion and oxydation. The process is particularly applicable to ores known as bisulphurets and sulphurets."

Claim.—A mode or process of oxydizing (or roasting or calcining) all oxydizable substances, such as metals, minerals, sulphurets, bisulphurets and ores, and at the same time and operation reducing to a metallic state such unoxydizable metals as may be present therein, by the use of the apparatus, and in the manner herein described, or any other apparatus or manner substantially the same, and which will produce the intended results.

No. 36,438.—B. F. LEE, of New York, N. Y., and H. A. ALDEN, of Fishkill, N. Y., assignors to the New York Rubber Company.—*Improvement in Hose Reels.*—Patent dated September 9, 1862.—This invention consists of an upright frame of a conical, cylindrical, or other convenient form, made to revolve upon a vertical shaft or spindle, and provided with supporting hooks or brackets for holding the hose, which hooks are arranged in such a manner as to give the latter a spiral direction when wound upon the reel, for the purpose of allowing any water that may be left therein to escape by its own gravity.

Claim.—A hose reel embracing the combination, with a frame of conical, cylindrical, or other convenient form, capable of revolution on a vertical spindle, of supporting hooks or brackets arranged spirally, substantially as herein shown and described.

No. 36,439.—G. M. MOWBRAY, of Titusville, Pa., assignor to Himself and BRADHURST SCHIEFFELIN, of New York, N. Y.—*Improved Naval Defensive Armor.*—Patent dated September 9, 1862.—This invention consists in constructing the framing of vessels with timbers interposed between and alternating with the ribs, being stepped into the keelson and extending upward in an oblique direction to points above the bilge where the armor is to commence, and where they protrude beyond the outside of the ribs to form a ledge for the support of the armor plates D D. Between, under, and above the plates D are arranged a series of plates *a a*, in connexion with a series of blocks of wood, inside of which and the timbers is applied a lining of iron plate, to which the inner portions of the plates *a* are secured by angle pieces.

Claim.—First, so constructing the framing of the vessel with timbers C C, or their equivalents, projecting outward beyond the ribs A A, and so applying the armor plates in combination with such timbers, or equivalents, that the weight of the armor is supported to such extent as may be desirable by the said timbers, or equivalents, and by them transmitted to the keelson of the vessel, substantially as herein specified.

Second, the combination of the plates D D and *a a*, the blocks *c c* and *d d*, the angle pieces *e e*, or their equivalents, and the lining *f*, the whole constructed and applied, in combination with the ribs A A, substantially as herein specified.

No. 36,440.—H. M. PAINE, of Worcester, Mass., assignor to E. M. ARCHIBALD, of New York, N. Y.—*Improvement in Steam Generators.*—Patent dated September 9, 1862.—The nature of this invention is explained by the claim; the object being to generate steam for the purposes of motive power under such conditions as to enable a boiler to be dispensed with, and economy of fuel and space obtained.

Claim.—The process of generating and superheating steam by injecting water in a comminuted state into superheated steam, by contact with which its particles are converted into steam, and afterwards permitting the circulation of the steam so obtained through a heated chamber to be superheated, substantially as herein specified.

No. 36,441.—S. A. SKINNER, M. D., of Bristol, Vt., assignor to Himself and SILAS RUGGLES, of Fitchburg, Mass.—*Improved Bedstead, Lounge, and Chair.*—Patent dated September 9, 1862.—This device is composed of a rectangular frame covered with wire netting, and provided with folding legs in connexion with a sliding and folding back, arranged and applied to the frame in such a manner that it may be adjusted on the frame to form a bedstead, lounge, or chair, as desired.

Claim.—The frame A, provided with the folding legs B, in combination with the sliding back F, connected to the frame A, through the medium of the slides E, fitted in the longitudinal groove *e* in the outer sides of the side pieces *a a* of the frame A and the pivoted racks *j*, all arranged as and for the purpose herein set forth.

No. 36,442.—JOHN SUTTON, of New York, N. Y., assignor to Himself and JAMES GREGORY, of the same place.—*Improved Combination of Sofa and Vessel Berth.*—Patent dated September 9, 1862.—This invention consists in combining with a fixed frame a vertically sliding seat, and berth frame and seat, and berth bottoms, in such a manner that the seat may be readily converted into berths, and *vice versa*. A sofa box is so constructed as to allow the cushion to sink into it to form sides and ends for the berth, and is provided with seat-elevating doors or supports, by which the cushion is supported when in use for a seat, and raised up to higher position when used for a berth. At the back of the seat is arranged a hoisting-gear, in connexion with a shaft, by which the parts may be conveniently raised and operated.

Claim.—First, the combination with the fixed frame A of the seat and berth frame E and seat, substantially as and for the purpose set forth.

Second, the combination with the sofa box C, constructed as described of the seat-elevating doors or stops *d d'*, substantially as and for the purpose set forth.

Third, the arrangement at the back of the seat, and in the manner described, of the hoisting-gear, for the purpose set forth.

No. 36,443.—ISAAC CUMMINGS, of Vienna, N. J., assignor to Himself and EUGENE J. POST, of the same place.—*Improved Method of Operating Shakers of Threshing Machines.*—Patent dated September 9, 1862.—The nature of this invention is explained by the claim.

Claim.—Operating the shaker by a direct connexion with the main shaft of the motive power, independent of the threshing cylinder belt, and detaching the shaker from all working connexion with the threshing cylinder frame.

No. 36,444.—SAMUEL BARNES, of Rochester, Mich.—*Improved Millers' Stone Staff.*—Patent dated September 16, 1862.—This invention consists in applying to a wooden face a back of iron or other equally firm and inflexible material, and attaching the same firmly, so as to prevent the wooden face from warping or contracting. The iron back is supported by a flange or brace, and in the back is set an ordinary spirit-level, so that, as the staff is passed over the stone for the purpose of indicating the raised spots, the operator can at the same time ascertain if the face of the stone or its whole setting is level.

Claim.—The application of a back of iron or other equally firm and inflexible metal material or substance to a surface of wood or other porous material capable of holding paint or other coloring matter for the purpose indicated, without warping, expanding, or contracting, and also the application of the spirit-level to such instrument, for the purpose indicated.

No. 36,445.—ALEXANDER BECKERS, of Hoboken, N. J.—*Improved Steering Apparatus.*—Patent dated September 16, 1862.—This invention consists in the employment of a conically grooved drum, from which an endless chain or rope passes to two sheaves that connect with the rudder head, in such a manner that the rotation of the conically grooved drum, as it draws upon the endless chain or rope, causes the rudder to be moved in proportion to the difference in the peripheries of the respective grooves of the conical drum, and the endless chain or rope passes in such a direction around the conical drum that but little power is required to hold the steering wheel under any circumstances.

Claim.—The conical grooved drum and endless rope or chain in combination with the sheaves *h* and *i*, connected to the rudder head, as and for the purposes specified.

Also, the screw *f*, and recess in the wheel *e*, to tighten the chain *e*, in the manner specified.

No. 36,446.—EDWIN BEMENT, of Fostoria, Ohio.—*Improvement in Plough Beams.*—Patent dated September 16, 1862.—Upon each side of the plough beam is a lateral brace, consisting of a rod secured to the rear of the beam at its downward curve by means of lugs, and secured by nuts. The forward ends of the rods are formed into links, which pass over the lateral extension of the clevis and fit in a recess at either end of the same. The pin upon which the clevis is secured fits in a slot in the beam, so that, when the centre of the clevis shall occupy the rear end of the slot, the draught will be constantly thrown upon the rods.

Claim.—The lateral braces C C, attached to the clevis at any point, and to the hinder part or downward curve of the beam, or to the standard, by means of the lugs B, or their equivalent, in combination with the slot H and clevis bolt I, all the parts being constructed and operating substantially as and for the purpose set forth.

No. 36,447.—EDWIN BEMENT, of Fostoria, Ohio.—*Improvement in Plough Points.*—Patent dated September 16, 1862.—This invention is explained by the claim.

Claim.—The ribs B C, both above and below the plough point proper, for the purpose of protecting the corners from wearing off or becoming rounded by use, and also to strengthen the point against a vertical strain and thus preserve it from being broken, as specified.

No. 36,448.—WM. BILLINGHURST and J. REQUA, of Rochester, N. Y.—*Improvement in Platoon Battery.*—Patent dated September 16, 1862.—Upon an iron bed plate, which may be of skeleton form, is arranged a series of barrels, each pivoted to the stock by means of a screw or bolt passing through a shank underneath the barrel. The breech bar is made from a solid bar and entirely detached from the barrels, and through the bar longitudinally is drilled a hole, with branches therefrom, leading to the centres of countersinks opposite each barrel to receive the spherical heads of the cartridge cases. The cartridge holder or clamp is composed of two wings made of thin sheet-iron, and hinged together and made to clasp the flanges upon the rear ends of the cartridge cases, in order to securely hold the same during transportation. Between the breech bar and bed plate is a thin metallic rack or guide for guiding the cartridges into their respective chambers, and serving also to withdraw the empty cases.

Claim.—First, the combination of the barrels B, operated as described, with the cartridges *g* and breech bar E.

Second, the employment of the cartridge holder or clamp D, constructed substantially in the manner and for the purpose set forth.

Third, the employment or use of the rest or guide W, constructed and operating substantially in the manner and for the purposes specified.

Fourth, the employment of the breech bar E, in combination with the backing plate P, when they are arranged and operated so as to automatically throw the hammer U back.

No. 33,449.—WILLIAM BOENEL, of Philadelphia, Pa.—*Improvement in the Application of Soft Metal Packing to Projectiles.*—Patent dated September 16, 1862.—Instead of the usual metallic bands or cups upon the projectile, and secured to the same by grooves and projections, the inventor employs cups prepared from any suitable composition of soft metals by first casting the same in the form of slabs of any convenient size, to be afterwards subjected to the action and pressure of rolls until reduced to the required thickness. From the metal thus prepared are cut circular blanks which, by a successive action of punches and dies, are formed into cups of the shape and size required, and are then drawn upon the iron projectiles. The projectiles are then subjected to the action of a drawing plate or die, by which the inner surface of the cup is thoroughly embodied with the iron, and thus is made to resist the torsional strain exerted upon the cups by the centrifugal motion imparted by the rifle grooves in firing.

Claim.—First, the described method of producing and attaching the soft metal expanding cup or packing band to the projectile.

Second, the described process of reducing the diameter of metallic expanding cups or bands to the exact dimensions required, and embodying the same with the iron by the application of a draw plate, or its equivalent, substantially in the manner and for the purpose specified.

No. 36,450.—JOB BROWN, of Lawn Ridge, Ill.—*Improvement in Device for Preventing Swine from Rooting.*—Patent dated September 16, 1862.—This device consists of a pendant formed of a piece of wire, bent in the form of a spiral spring, and having its ends curved, so as to meet and form a clasp to grasp the partition within the nose or snout of swine, the object being to obviate the necessity of puncturing or boring the snout.

Claim.—A spring pendant constructed and applied to the nose or snout of swine, substantially as and for the purpose herein set forth.

No. 36,451.—C. W. CAHOON, of Portland, Maine.—*Improvement in Lamps.*—Patent dated September 16, 1862.—This invention consists in the employment of a grooved clamp support for the chimney holder of a lamp, so constructed that when it is applied to the rim of the lamp head and clamped thereto, the mutual engagement of the rim and groove prevents the upward or downward movement of the support without other means of fastening than the clamp support.

Claim.—A grooved clamp support for a vibrating chimney holder, substantially as set forth.

Also, the combination of a grooved clamp support with a rimmed lamp head, substantially as set forth.

No. 36,452.—M. L. CALLENDER, of New York, N. Y.—*Improvement in Vapor Burners.*—Patent dated September 16, 1862.—This invention relates to burners for the vaporization and combustion of the vapors of the heavier volatile hydrocarbon liquids, such as naphtha or camphene, and its object is to provide for the more effectual vaporization of the liquid by heat before the arrival of the vapors at the mouth of the burner, and for the more perfect combustion of the vapor. Within the supply pipe is a smaller pipe, provided with a metal rod, which is caused to close the aperture leading to the burner, but when the burner is heated the rod expands and causes the valve to open. Attached to the body of the burner are open wings arranged one on each side of the two opposite sides of the mouths, and having their inner and outer edges corrugated and their upper edges inclined toward each other, to facilitate the passage of air to the flame.

Claim.—First, constructing the side wings F with open centres for the admission of air, as herein shown and described.

Second, the combination with the pipe D of the self-acting valve rod *d*, as herein shown and described.

Third, the construction of the wings E E with the upper edges of their inner faces bent or ribbed, so as to form spaces or interstices for the admission of air to the flame, substantially as herein shown and described.

No. 36,453.—THEODORE CLOUGH, of New York, N. Y.—*Improvement in Preparing Petroleum for the Manufacture of Illuminating Gas.*—Patent dated September 16, 1862.—This invention consists in placing crude petroleum in a common still suitable for distilling hydrocarbon oils and applying heat thereto, gradually raising the temperature until the more volatile matters and light oil vapors of a boiling point of 600° Fahrenheit are driven off from the mass acted upon, and until the remainder in the still, which is about thirty to thirty-five per cent. of the original charge, becomes of a specific gravity about 28° to 30° Baumè, at which point the distillation is stopped, and the still having cooled down, the remaining undistilled oil is drawn off.

Claim.—As a new manufacture, the gas-making oil obtained by treating petroleum substantially as described.

No. 36,454.—C. O. CROSBY and HENRY KELLOGG, of New Haven, Conn.—*Improved Manufacture of Tape Trimmings.*—Patent dated September 16, 1862.—This invention is explained by the claim and engraving.

Claim.—As a new article of manufacture the finished tape trimming folded and stitched by machinery, and constituted substantially as herein described—that is to say, of a continuous length of tape in folds, presenting a succession of points and held as folded by a continuous line or several lines of stitches, making a continuous seam or seams along the length of the finished article.

No. 36,455.—R. E. DEANE, of New York, N. Y.—*Improvement in Cooking Stoves.*—Patent dated September 16, 1862.—The object of this invention is to provide a means for preventing the sagging down, by its own weight, of that part of the top of the range immediately over the fire to the heat of which it is continually exposed.

Claim.—The combination with the hot plate of a cross-bar, having a channel cast therewith on the under side thereof, so as to be interposed between the fire and the hot plate of which said bar forms a part, and provided with induction and eduction pipes, as specified, for the purpose of circulating and maintaining water within the hot plate, and heating the water while preserving the said plate from injury by the heat.

Also, the form and arrangement of a channel or channels, as set forth, with a three-oven flange, or the equivalent thereof, substantially as described.

No. 36,456.—G. F. DEGELOW, of Bethlehem, Pa.—*For a Process of Imitating the Grain of Wood, &c.*—Patent dated September 16, 1862.—This invention is explained by the claim.

Claim.—The above described mode of imitating the peculiar porous appearance of the grain of various woods on paper, leather, oil-cloth, wood, metal, or other suitable material, by first covering the material with a coat or coats of color, and then, preparatory to the usual process of graining and varnishing, imprinting on the colored surface numerous small indentations, resembling the pores of the wood to be imitated, by means of a suitable instrument provided with a number of sharp points and edges, all as above set forth.

No. 36,457.—F. A. DE MEY, of New York, N. Y.—*Improvement in Mounting Field Ordnance.*—Patent dated September 16, 1862.—This invention consists of a breech-loading cannon, mounted upon a revolving platform, which latter is provided with an iron shield in the form of a partial dome, and having opposite the muzzle of the gun an opening provided with a hinged shield. The revolving platform is connected with the carriage platform through the intervention of horizontal springs so arranged as to allow, in connexion with the housings or slides, a sufficient horizontal motion of the one relatively with the other in every direction to provide for the recoil.

Claim.—First, the combination of a gun, front shield, revolving table, and supporting carriage, with a provision for the recoil of the gun when fired in any direction thereon, the whole being arranged to operate as artillery, either in a state of rest or of motion, without necessary alteration, substantially as described.

Second, the employment in a carriage for ordnance, substantially of the character herein described, of the slides C D, and of springs controlling the motion thereof, arranged to operate as herein set forth, and this irrespective of the precise construction of the springs.

No. 36,458.—S. F. EMERSON, of Seville, Ohio.—*Improved Clothes-Wringing Machine.*—Patent dated September 16, 1862.—Upon a bar of wood, constituting the base of the machine, is secured a metallic spring, the ends of which are bent upwards so as to form standards for the rollers, the latter being journalled in the extremities of the springs, and one roller placed a little higher than the other. To the under side of the base piece are secured two adjustable gripes by which the device is secured to the tub.

Claim.—Mounting the rollers directly upon the tip of the springs E F, in the manner specified, in combination with the bar A and adjustable gripes G G, the several parts being constructed and arranged substantially as and for the purpose described.

No. 36,459.—WM. F. GOULDING, of Providence, R. I., and FRANK CHENEY, of Hartford, Conn.—*Improvement in Drop Presses.*—Patent dated September 16, 1862.—In this machine the drop weight or hammer is raised in guides by means of a straight strap of leather, sheet metal, or other material possessing the requisite friction surface, and made to pass between the faces of two pulley wheels. In order to prevent any slack in the strap when the hammer is down, use is made of a friction block placed against the strap over the cross-head of the gallows frame, the degree of friction upon which block is regulated by means of a bell-crank lever. From each side of the drop-weight project ears, which are made to operate adjustable stops, so as to admit of the ready adjustment of the height from which the hammer is to fall, and insure an immediate ascent to its proper elevation the instant the blow has been struck.

Claim.—First, the combination of a strap C, either flexible or otherwise, (as distinguished from a belt,) or its equivalent, in combination with a pair of friction pulleys D D′, substantially as described, for the purposes specified.

Second, the combination of a friction drag *m l* with the strap C, or its equivalent, substantially as described.

Third, the combination of the adjustable supporting stop *b* and the hammer A, substantially as described.

Fourth, the combination and arrangement of the hammer A with both the adjustable stops *a* and *b*, when the latter are combined with each other to arrest the further ascent of the hammer and to sustain it at any given point, substantially as described.

No. 36,460.—ROYAL HANCE, of Piscatonia, Ill.—*Improvement in Harvesters.*—Patent dated September 16, 1862.—Secured to the outside of the forward end of the draw-bar is a "fulcrum lever," having its rear end supported by a fulcrum wheel, the bearing of which is pivoted to the said lever by means of a crooked shank, so as to adjust itself to the line of draught. Above the fulcrum wheel is a "fulcrum post," to which is pivoted a lever connected to the frame by means of a chain and hook, so that the driver, by raising or depressing the lever, is enabled to elevate or lower the cutter as desired.

The reel is supported at each end by an adjustable framework, by means of which the reel can be raised or lowered or placed in an oblique position relatively with the cutter-bar. It is secured in any desired position by means of bolts and holes in standards at the sides and in a curved bar at the outer side.

Claim.—First, the fulcrum lever F, fulcrum wheel F′, fulcrum post H, and lever I, in combination with the draw-bar C, machine frame C′, and platform frame A, arranged and operating as and for the purpose specified.

Second, the adjustable frame N N′, the standards O O′, and curved bar O″, when arranged as and for the purpose specified.

No. 36,461.—L. T. HAZEN, of Coventry, N. Y.—*Improved Mode of Securing Cross-bar and Shafts to Vehicles, &c.*—Patent dated September 16, 1862.—This invention consists in constructing the thill irons with sockets, so formed as to receive the cross-bar and shafts and hold them firmly in place by forcing a wedge into the wood, thereby dispensing with bolts and rivets. The clip-iron or cock-eye is cored to receive a rolling socket, made so as to form a shell or matrix, into which the block of the thill iron is fitted. In the clip is also a small reservoir which contains oil for lubricating the socket.

Claim.—First, encasing the ends of the cross-bar and shafts in the socket thill iron and securing the same with internal wedges, in the manner as and for the purposes herein set forth.

Second, the oil-chamber *i* in the clip-iron F, in combination with the rolling socket I and the shaft or thill iron A, the whole being constructed and operating substantially as herein specified.

No. 36,462.—A. A. HIBBERD, of Hermitage, N. Y.—*Improvement in Machines for Setting and Upsetting Saws.*—Patent dated September 16, 1862.—This invention consists in the employment of two dies in connexion with a guide and clasp, one of the dies being bevelled at one end and the other having a triangular groove, so as to form a point when it is connected with the guide, the object being "to keep the outside of the tooth straight and the edges flush."

Claim.—The dies D and E and their arrangement, substantially as and for the purpose specified.

No. 36,463.—THOMAS HIGGINS, of Bow, England.—*Improved Machine for Filling Dipping Clamps in the Manufacture of Matches, Tapers, &c.*—Patent dated September 16, 1862.—This invention relates to an arrangement of machinery whereby the splints, tapers, or matches intended to receive on their ends a coating of composition that will ignite by the application of friction may be arranged with facility in clamps ready to undergo what is known as the dipping process, by which the phosphorus compound is applied to the tips of the splints, &c.

Claim.—The mechanical means above described for arranging splints, tapers, and matches parallel to each other and discharging them into suitable dipping clamps.

No. 36,464.—D. A. HOPKINS, of Brooklyn, N. Y.—*Improvement in Tiges for Fire-arms.*—Patent dated September 16, 1862.—This invention consists in providing that part of the gun in which the charge is placed with a tige or stem in combination with openings at opposite sides of the tige and connecting the rear end of the charge-chamber with the cone or nipple, causing the charge to be fired upon opposite sides of the tige at the same instant, whereby the bending of the tige which frequently results from firing the charge only upon one side thereof is prevented.

Along the centre of the tige is an opening communicating with the outside thereof by openings near each end, whereby, when the charge is fired, the flame may pass from a point or points at or near one end of the charge to a point or points at or near the other end thereof without igniting it at the centre.

The charge-chamber which surrounds the tige is provided with small chambers, located, respectively, one at the forward and the other at the rear end, so connected and arranged that the powder they receive shall be burned therein, instead of being driven forward when the charge is fired.

Claim.—First, two or more [illegible]

Claim.—First, two or more openings connecting the rear end of the charge with the cone, whereby the charge is first fired upon opposite sides of the tige, at the same instant, for the purpose stated.

Second, the passage *o*, or its equivalent, and the combination thereof with lateral openings located and connecting therewith, substantially as shown and described, whereby flame may pass from a point or points at or near one end of the charge to a point or points at or near the other end thereof without igniting it at or near the centre, for the purpose set forth.

Third, the powder-chambers *s* and *r*, located and arranged substantially as shown and described, for the purpose specified.

No. 36,465.—B. B. HOTCHKISS, of Sharon, Conn.—*Improvement in Percussion Fuse for Explosive Shells.*—Patent dated September 16, 1862.—At the forward end of a projectile of any proper form is fitted a case, within which is placed a ball G. Below the case and within the projectile is another ball H, of similar size and material as G, and the two are connected through an opening in the case by means of a cloth envelope wrapped tightly around both balls, so as to keep them together under ordinary circumstances. As the projectile is discharged from the cannon, the envelope is torn apart, and the ball G is released and forced against a wafer placed at the forward end of the case, when the projectile is suddenly checked by striking an object and the explosion ensues, the flame communicating through the hole in the case to the contents of the projectile.

Claim.—The weakly connected plunger G and a weight H, so arranged as to stop the orifice in the back of the case C until the discharge of the cannon, and so to open the orifice certainly at the instant of said discharge, and no longer maintain any connexion between the plunger and the wedge, all substantially as and for the purpose herein set forth.

No. 36,466.—F. W. HOWE, of Providence, R. I.—*Improvement in Breech-loading Fire-arms.*—Patent dated September 16, 1862.—This invention consists in providing the rear and open end of the barrel through which the charge is inserted, with a thin projecting ferrule in combination with a movable breech, the face of which is formed with a cavity that fits over and embraces the rear end of the said ferrule, by which means the breech is effectually closed, the expansion of the ferrule by the force of the explosion preventing the escape of the gases and smoke.

Combined with the movable breech, and a catch for holding it in place when closed, is a projection on the back of the hammer, for the purpose of preventing the hammer from being lifted from the nipple when the breech is not perfectly closed, and for preventing the breech from being closed when the hammer is either at half or full cock.

Claim.—The projecting ferrule at the rear open end of the barrel, substantially as described, in combination with the movable breech, or the equivalent thereof, having a cavity in its face to fit over and enclose the said ferrule, substantially as and for the purpose specified.

Also, in combination with the movable breech, and the catch for securing it when closed, the sector or equivalent projection on the cock or hammer, which prevents the hammer from being lifted from the nipple when the breech is not entirely closed, and which prevents the breech from being closed when the hammer is at half or full cock, substantially as and for the purpose described.

No. 36,467.—SAMUEL HUSON, of Jacksonville, N. Y.—*Improvement in Grain and Straw Separators.*—Patent dated September 16, 1862.—This invention consists in the employment of a series of arms provided at their lower ends with pickers, and pivoted at about the centre of their length to a multiplied crank. The upper ends of the arms are attached to rods which are hinged to the upper cross-piece of the frame, so that as the crank is turned a "horizontal elliptical movement" is imparted to the pickers to agitate the straw.

Claim.—Attaching the upper ends of the vertical arms E of a grain and straw separator to the rods F, and their centres to the cranks B, for the purpose of transmitting to the pickers G a horizontal elliptical movement, in the manner and for the purpose described.

No. 36,468.—WILLIAM KINGSLEY, of New York, N. Y.—*Improvement in Igniting Explosive Shells*—Patent dated September 16, 1862.—This invention consists in making shells with a tube, the bore of which passes through from the rear to the fuze in front, so that the flame produced by the explosion of the charge of powder shall pass through to the fuze in front and insure its ignition.

Claim.—Making fuze shells with a tube or passage from the rear end to the fuze in front, substantially as and for the purposes specified.

No. 36,469.—J. K. LEEDY, of Bloomington, Ill.—*Improved Sugar Evaporator.*—Patent dated September 16, 1862.—This invention consists of an apparatus for evaporating sorghum juice, combined with a still for making alcohol from the washings, scum, and waste saccharine matters. Above are two tanks, one for holding the fresh juice, and the other for holding water for supplying the steam boilers which supply steam for evaporating. The cold-water tank also serves as the cooling tub for the worm of the still. The walls of the fire-box and flues are hollow and form the steam boilers. The evaporating pans are arranged so that one side will be kept very hot, whilst the other by means of a cold-air flue is kept at a low temperature to cause the steam to rise as the boiling juice is thrown against it. After the juice thickens, it is caused to flow through a gutter in the upper side of a steam pipe, said steam pipe being coiled spirally around the still. The distillation is effected by steam.

Claim.—First, the water reservoir 1 and sorghum reservoir 2, constructed and arranged substantially in the manner and for the purposes specified.

Second, the construction and arrangement of the scum condensing pipes 9 for collecting the scum at the edge of the boiling pans 4 and 5, substantially as herein specified.

Third, the construction and arrangement of the scum condensing shield pipes C for shielding pipes 9 from the action of the fire, substantially as herein set forth.

Fourth, the construction and arrangement of the water or steam boilers A and the fire flues 8, operating substantially as hereinbefore specified.

Fifth, the channelled steam pipe 6, with or without the "pitch-offs" W, operating substantially as herein set forth.

Sixth, the combination and arrangement of reservoir 1, pipe J, stop-cock R, stop-cock O, and pipe C and stop-cock P, operating as set forth, for cleaning the steam heater 3 and boiling pans 4 and 5, and pipe 6.

Seventh, the combination of the still 7 with the pipe 6, when operating substantially in the manner and for the purposes hereinbefore set forth.

No. 36,470.—DAVID MAYDOLE, of Norwich, N. Y.—*Improved Skate Fastening.*—Patent dated September 16, 1862.—At the back part of the heel plate of the skate is a hook which is designed to catch over a bar attached to the heel of the boot or shoe to form a heel fastening, and through the sole plate of the skate passes a T-shaped bolt adapted to be turned in the slot of a plate attached to the sole of a boot or shoe to form a fastening for the toe, for the purpose of securing a skate to the foot.

Claim.—First, the hook F and plate G employed in the manner described, in combination with a T or hook-shaped sole fastening, operated by a lever J or J′, substantially as set forth.

Second, the T-shaped bolt I, sole plate H, and lever J′, in combination with the pins or screws *h h′*, or their equivalents, and ridge *n*, when arranged to operate in the manner and for the purpose set forth.

No. 36,471.—HUGH MCCLINTEN, of Morrow County, Ohio.—*Improved Apparatus for Evaporating and Defecating Sorghum Juice.*—Patent dated September 16, 1862.—This apparatus is composed of two pans, the lower edge of one of which is level with the upper edge of the other, the latter being divided into several compartments. The upper pan is provided with a faucet covered by a strainer and leading to a receiver in the lower pan, from which receiver extend a number of pipes to a compartment at the other end of the lower pan. Through these pipes the boiling sorghum passes, thus causing a rapid evaporation thereof after it is reduced to a certain consistency without danger of scorching the sirup or allowing it to mix with the raw juice that covers the pipes.

Claim.—The aforesaid apparatus for evaporating and defecating the juice of sorghum, consisting of said pans, strainers, faucets, pipes or tubes, and compartments, as combined in the manner aforesaid.

No. 36,472.—CHARLES MCINTIRE, of Easton, Pa.—*Improvement in Culverts.*—Patent dated September 16, 1862.—This invention consists in forming the lower half or section of a culvert of iron provided at each upper end with a projecting rectangular flange which rests upon string pieces supported upon piles. Upon this flange is built an arch of stone or brick forming the upper section of the culvert.

Claim.—In the construction of culverts to be used in water and quicksands, the combination of the upper arch of brick or stone with the lower arch of iron, when the latter is constructed with the flanges B and C, the flange B being constructed to suspend the lower arch upon piles, stringers, or their equivalents, and the flange C as a base support for the upper arch of brick or stone, in the manner and for the purpose herein described.

No. 36,473.—JOHN MCKENNA, of Pittsburg, Pa., assignor to Himself, A. and T. MCKENNA, of the same place.—*Improvement in Faucets.*—Patent dated September 16, 1862.—This faucet is constructed with a longitudinal division in the shank so as to make two separate and distinct ways leading through the key to the bottom of the barrel in which the key turns, and arranged in relation to each other and to the key so that when the faucet is driven into a cask containing ale or other malt liquors that generate gas, and a pressure is created thereby upon the liquid, then both of the ways will act as openings for the fluid to pass through into the same vessel; and when the liquid becomes flat, and requires air to enable it to run, one of the ways acts as an air vent to allow the liquid to be drawn off without the necessity of admitting air to the barrel in any other way.

Claim.—A faucet having a division in the shank, forming separate and distinct ways, with their outlets below the shank, and enabling the fluid to pass through both into the same vessel, or one to act as a fluid way and the other as an air vent, as occasion may require it, as herein set forth.

Also, combining with the two-way shanks L the chamber E, with the cut-off at its bottom, arranged below the line of the shank, for the purpose as hereinbefore stated.

No. 36,474.—S. G. MORRISON, of Williamsport, Pa.—*Improved Lining for Coal-Oil Casks.*—Patent dated September 16, 1862.—This invention consists in saturating the wood of vessels or barrels designed to contain hydro-carbon oils with soap in a melted or heated state, and coating the interior of the vessels with a thin covering of hardened soap.

Claim.—The application of soap, substantially as and for the purpose specified.

No. 36,475.—JOHN NEFF, of Prattsburg, N. Y.—*Improvement in Machines for Making Horseshoes.*—Patent dated September 16, 1862.—The object of this invention is to combine in a single and compact device all the elements and conveniences necessary in bending, creasing, punching, and caulking horseshoes so that they can be formed at the anvil with the ordinary smiths' tools.

Claim.—The cam lever M with its cam *b*, in combination with the notch L, provided with an inclined bottom *a*, arranged substantially as herein set forth.

Also, the device for forming horseshoes, consisting of the block A provided with a curved guide D, creaser E, punch G, openings I K, inclined notch L, and cam lever M, the whole arranged, combined and operating substantially as and for the purposes herein specified.

No. 36,476.—G. W. PARROTT, of Lynn, Mass.—*Improved Machine for Nailing on the Soles of Boots and Shoes.*—Patent dated September 16, 1862.—This machine is designed for nailing the soles of boots and shoes to the upper leather, the nails being driven through and clinched down on a metal-plated last, and is more particularly applicable to thin-soled boots or shoes. Reference to the specification and drawings will be necessary for an understanding of the construction and operation of the machine.

Claim.—First, the vibrating block K for cutting off the nail, when the block is hung on an eccentric *m*3, by which it is raised to relieve the pressure on the shoe, whilst the shoe is being fed along under it, substantially in the manner set forth.

Second, inclining the nail rod or strip *t* to the block or cutter K, to cut the nail tapering, and turning over the strip after each cut to present the nail to be driven with its point down, substantially in the manner specified.

Third, the clamps *r*, and the parts connected therewith for feeding forward the strip *t*, in combination with the mechanism for revolving the said strip, substantially as described.

Fourth, the sliding block F, pin 12 and grooved cylinder I, for revolving the strip *t*, substantially as set forth.

Fifth, the adjustable braces *k* and *u*, for setting the nail rod at any required inclination to the block or cutter K.

Sixth, the mechanism substantially as described for feeding the shoe and turning it round to place the row of nails around the heel and toe.

Seventh, adjusting the lever *g*3, so that the dog *i*3 on it shall strike the head of the dog *h*3, or other stop, at part of the vibration of the lever, and thereby vary the feed, to make the spaces between the nails different along the sides of the shoe and around the heel and toe.

Eight, placing the cog wheel *y*2 eccentric to the disk T, so that it shall engage with the rack *w*2 or *x*2, which may be on the upper side, substantially as specified.

Ninth, the plate *g*2 applied to the sole of the shoe, in the manner and for the purpose specified.

No. 36,477.—J. N. PEASE, of Harmony, N. Y.—*Improvement in Horse-powers.*—Patent dated September 16, 1862.—This invention consists in the employment of a stationary wheel, which may be toothed or provided with sunken gear, and used in connexion with a radial travelling frame, in which is placed a pinion that gears into the stationary wheel, motion being communicated from the pinion to the shaft from which the power is taken by means of pulleys and a belt or rope.

Claim.—The stationary wheel A in combination with the radial travelling frame H, provided with the vertical shaft I, which is connected by gearing with the wheel A, so as to communicate, by the travelling of frame H, motion to the central shaft D, by the rope or belt K, substantially as and for the purpose set forth.

Further, the double sunken gear *a a'* or equivalent teeth or clogs in the periphery of the wheel A, in combination with double pinion C C' on shaft I, when said parts are arranged as shown and used in connexion with the travelling frame H, and central shaft D, as and for the purpose specified.

No. 36,478.—C. H. PHELPS, of New York, N. Y.—*Improved Can or Tank for Coal Oil.*—Patent dated September 16, 1862.—This apparatus consists of a sheet-metal box fitted snugly within a wooden case and having a metal socket secured to the lower part of one of its sides. This socket has a circular opening at its centre provided with an internal screw, in which is inserted a screw plug for containing a faucet provided with a spigot. The barrel of the faucet has two screws on its external surface, one at its outer and the other at its inner end, so as to screw into the plug, and is so arranged that when in use the spigot projects from the

case, but when not in use it may be secured within the case out of the way, so as to admit of the cases being packed close together for transportation without endangering the faucets.

Claim.—First, a sheet-metal can or receptacle, provided with a faucet inserted in a screw plug, for the purpose specified.

Second, the constructing of the faucet with two screws, substantially as shown, when used in combination with the screw plug, as and for the purpose herein described.

No. 36,479.—F. A. PRATT, of Hartford, Conn.—*Improved Tool Rest for Turning Lathes.*—Patent dated September 16, 1862.—This invention relates to that part of the slide rest of a turning lathe which supports the clamp in which the cutting tool is held, and which by an adjustment for vertical movement permits the height of the tool's point to be varied as may be required, and operated as explained by the claim.

Claim.—The combination with the feed carriage of a turning lathe of a vertically movable tool clamp carrier, a vertical guide so arranged as to confine the movements of all parts of the carrier in perpendicular lines, and an adjustment screw, independent of the tool clamp, for moving the carrier, substantially in the manner and for the purpose hereinbefore set forth.

Also, the combination with the movable tool clamp carrier, its described vertical guide and its independent adjusting screw of the set screw L, so arranged as to clamp the carrier in its guide, substantially as hereinbefore described for the purpose set forth.

No. 36,480.—H. W. PUTNAM, of Cleveland, Ohio.—*Improved Clothes Wringer.*—Patent dated September 16, 1862.—This invention is explained by the claim.

Claim.—Casting around the body of the iron shaft an alloy of metal, with collars substantially as described, this alloy covering being interposed between the iron shaft and the rubber covering, for the purpose of protecting the iron shaft from the corrosive action of the sulphur contained in the vulcanized rubber, as herein specified.

No. 36,481.—ABRAHAM QUINN, of New York, N. Y.—*Improvement in Apparatus for Distilling Petroleum and Other Oils.*—Patent dated September 16, 1862.—This invention is designed as an improvement upon an apparatus for which a patent was granted to the said Quinn on April 9, 1861, together with additional improvements, and consists in an arrangement of devices by which, first, the still is continuously supplied with oil freed from water or explosive vapors during the process of distillation; second, a continuous stream of oil is caused to run from separate condensing chambers, after having been completely rectified and agitated, in contact with chemicals, while in the process of distilling and condensing; third, distilling oils at the lowest heat necessary to convert them into vapor, and thus lessening the quantity of permanent gas produced in the distilling process; fourth, causing the vapor of the heavier oils on their way towards the condensing apparatus to meet the crude oils on their way to the still, and so to heat the latter to such an extent as to extract the vapor from the lighter oils; and fifth, extracting from crude petroleum or coal oil all of the products which are best suited for illuminating purposes, and leaving a more unctuous oil for lubricating or other purposes.

Claim.—First, the still-neck B constructed with dams *y y*, and having pipes *b* and *y'*, and applied in combination with such dams, substantially as herein specified.

Second, the basins P P' placed within the chambers C C' of the rectifiers, and in combination with the pipes Q Q', substantially as herein specified.

Third, the perforated diaphragms *p p p' p' p*2 *p*2 arranged within the rectifiers, substantially as and for the purpose herein described.

Fourth, the arrangement of several rectifiers, in combination with each other, with the still retort, and with the device or apparatus for feeding the crude oil, in such manner that the vapors of the heavier oils on their way to the condensing apparatus meet the crude oil on its way toward the still retort, and heat the latter oil to such an extent as to extract the vapor of the more volatile portions of it before it arrives at the retort of the still, substantially as herein specified.

Fifth, the purifier E, arranged in relation to the rectifiers, the feeding apparatus, and the worm E', substantially as and for the purpose herein specified.

Sixth, the oil receiver H and chemical tank I, and their pipes S U, funnel O, siphon N, cocks *j k*, and strainers T T, the whole combined to operate substantially as herein specified.

No. 36,482.—BARTON RICKETSON, of New Bedford, Mass.—*Improvement in Rigging, and in the Spars of Ships and other Navigable Vessels.*—Patent dated September 16, 1862.—The object of this invention is to reduce the cost of the rig, spars, and sails of vessels, and to obtain increased speed by providing for the carrying of a greater area of sail, to facilitate the working of the sails, whereby a vessel of a given tonnage can be worked by fewer hands. The yards are fitted around the masts in such a manner as to allow their axes to intersect the axis of the mast, one arm of each being longer than the other, so as to enable it to carry a larger area of sail on one side of or abaft the mast, the same being separate from the portion on the other side or forward of it.

Claim.—First, the construction of the yards to fit around the mast, with a movable cheek piece *b* on one or both sides, substantially as and for the purpose herein specified.

Second, so applying the yards which fit around the mast that they also slide up and down thereon, substantially as herein specified.

Third, providing the yards with jackstays, constructed as herein specified.

Fourth, the attachment of the foot ropes to the yards by means of rigid hangers *p p*, so applied as to keep the said ropes outside of and out of contact with the shrouds, substantially as herein specified.

Fifth, the travelling back and head stays *x y*, applied and operating in combination with yards fitted over and around the mast, substantially as and for the purpose herein set forth.

Sixth, the combination of the revolving stays 29 29 and outriggers N N, applied to the mast, and in relation to the yards fitted around the mast, substantially as and for the purpose herein specified.

No. 36,483.—BARTON RICKETSON, of New Bedford, Mass.—*Improved Sails for Ships and other Navigable Vessels.*—Patent dated September 16, 1862.—This invention relates to fore-and-aft sails and to square-sails, which are divided vertically to allow the yards to be arranged to turn upon the mast with their axes in the same plane with the axis of the mast. To the inner vertical edges of the sail or sails are attached metal bows, which slide freely up and down upon iron rods attached to the mast. To the leaches of the inner sails are attached studding or other sails, by means of metal slides, fitted so as to slide up and down on the leaches.

The lower and outer corners of the sails are provided with a metal bar, having at their lower ends an eye to form the cringle of the sail, and another eye for the attachment of the bolt rope, and extending up the side of the sail, where it is provided with a cavity for the reception of the leach of the sail, for the purpose of protecting the lower portion of the sail from the chafing action of the metal slides.

Claim.—First, the attachment of topsails and courses to masts by means of rods Q Q and metal slide bows P or slides T T, constructed and applied substantially as herein specified.

Second, the attachment of sails or portions of sails to each other by means of slides T T, secured to one, and fitted to slide up and down the leach of the other, substantially as and for the purpose herein specified.

Third, fitting the lower and outer portions of a sail with a metal bar X, constructed substantially as herein specified.

No. 36,484.—A. ROBINSON, of New York, N. Y.—*Improvement in Fabrics for Roofing.*—Patent dated September 16, 1862.—This invention consists in the employment of paper of any suitable kind cut into strips of a proper width and twisted or folded in the form of twine or cord, which are then woven into a fabric having a warp and a filling or weft of the same material, or having one of the parts made of twine or cords of hemp, cotton, or other material. This material when applied is covered with a coating of any suitable cement.

Claim.—A roofing fabric made of woven strips of paper, or strips of paper and twine woven together, and cement, substantially as herein shown and described.

No. 36,485.—G. SANFORD and J. E. MALLORY, of New York, N. Y.—*Improvement in Machinery for Breaking and Cleaning Flax and Hemp.*—Patent dated September 16, 1862.—This invention consists in the employment of one or more pairs of griping, fluted rollers, by which the material to be operated upon is fed in at one side so that the woody part is broken by a crushing action, and the broken fragments loosened and separated by a rubbing action of the flutes, alternately in opposite directions and equally upon both sides of the bunch, which latter is then delivered on the opposite side of the machine.

Claim.—The mode of operation, substantially as described, of one or more pairs of fluted rollers for breaking and cleaning flax, hemp, and other like fibre-yielding plants, which mode of operation consists in giving to the pair or pairs of fluted rollers which gripe the flax or other plant a reciprocating rotary motion alternately in opposite directions, the motion in one direction being greater than in the opposite direction, substantially as and for the purpose described.

No. 36,486.—THADDEUS SELLECK, of Greenwich, Conn.—*Improvement in Traction for Locomotive Engines.*—Patent dated September 16, 1862.—This invention is explained by the claim.

Claim.—The employment of granulated franklinite metal, as a means for producing traction or adhesion of locomotive-engine wheels on the track, as set forth.

No. 36,487.—JAMES STIMPSON, of Baldwinsville, Mass.—*Improvement in Journals and Journal Boxes.*—Patent dated September 16, 1862.—The lower part of the journal box is constructed with a lubricating chamber which is formed transversely of the box and divided into two parts. Communicating with the oil chamber is also a vertical chamber at each side of the lower portion of the box. The journal is provided with a collar or annulus so disposed as to revolve freely through the oil chamber and made tapering from its inner end to the periphery so as to cause the lubricating material to flow from each side of the same to the journal. The journal box is formed with a diagonal groove from each lower half so as to cause the surplus lubricating material to pass through the entire length of the box.

Claim.—The above described application of an oil or lubricator chamber C, and an annulus or collar F, or its equivalent, to a journal and its box or bearing surfaces, the same being arranged substantially in manner and so as to operate as set forth.

Also, when the journal and its box or bearing surfaces are so made, forming a groove *c*, to extend diagonally across each of the bearing surfaces, substantially in manner as described and represented, and for the purpose set forth.

Also, the above-described arrangement of the auxiliary or filling chamber *o* with respect to the main and side chambers *f* C, the same being productive of advantages, as above set forth.

No. 36,488.—JOHN TAGLIABUE, of New York, N. Y.—*Improved Apparatus for Testing Coal Oil.*—Patent dated September 16, 1862.—This apparatus is composed of a case, in the lower part of which is placed a lamp, and at the upper part is supported a vessel for containing water, provided near its upper edge with holes to allow the escape of the water so as to secure a uniform level of the same. Supported within this water-bath is a vessel for containing the oil to be tested, and having a groove near its top, which groove is to be placed opposite the bottom of the holes in the water-bath. for determining the height of the oil in the same, so that it will correspond with the level of the water in the bath. In the upper part of the oil vessel is a glass tube supported by means of a wire attached to pieces of cork as non-conductors, on either side, which tube is provided with a wick. The explosiveness of the oils is tested by lighting the wick in the oil vessel, and at the same time heating the water.

Claim.—First, the employment of the holes *c c* in the water-bath C, in connexion with the mark *d* for adjusting the height of the oil in D, for the purpose set forth.

Second, the employment of the glass capillary wick-tube H, for the purpose above described.

Third, supporting the wick-tube H by means of a poor conductor, for the purpose of preventing the transmission of heat from the flame M to the oil in D, substantially as herein described.

No. 36,489.—J. N. WALKER, of Cincinnati, Ohio.—*Improvement in Railroad Car Brakes.*—Patent dated September 16, 1862.—This invention consists in the employment of a vibrating hanger embracing an endless screw which engages with a wheel between two friction flanges regulated by a double set screw, which may be thrown in and out of gear by a vibrating spring lever operated by an adjustable ball upon a cord extending to a point within reach of the engineer of the train, so that each brake will be under his control, and that the brakes may be applied to any one car or to the whole train when desired, without the necessity of employing brakemen for each car.

Claim.—First, the hanger H, shaft I operating upon the universal joint J, and wheel K, combined with the endless screw H, in manner and for the purpose herein described.

Second, the worm wheel K, combined with its two flanges L L and the double set screw M, in manner and for the purpose herein described.

Third, the combination of the lever P, constructed with a hole and slot in its upper end, with the cord R R, adjustable ball Q, spring S, and connecting lever O, in the manner herein described.

Fourth, the construction and arrangement of the hanger H, with its projecting arms embracing the screw F upon the axle, and in vibration therewith, and with the foregoing claims, in manner and for the purpose herein described.

No. 36,490.—ALLEN WALTON, of Philadelphia, Pa.—*Improved Bung for Oil Casks.*—Patent dated September 16, 1862.—This stopper consists of a screw tube provided with a flange fitting in a recess on the outside of the barrel, the tube being secured to the barrel by a nut on the inside. Fitted within the tube is a metal plug having a many-sided head, and on its body three projections, the edges of which formed inclined planes arranged to bear against projections on the inside of the tube. Between the head of the plug and the flange of the screw-tube is interposed a washer of leather, so that when the plug is turned by a key the inclined edges and projection cause a perfectly tight joint to be made.

Claim.—In combination with the stave of a coal oil cask the screw tube B, with its flange *b*, the screw plug D, and its head *d*, and the intervening washer *m*, the whole being conatructed and applied to the stave as set forth for the purpose specified.

No. 36,491.—W. M. WARREN, of Watertown, Conn.—*Improved Foot Press.*—Patent dated September 16, 1862.—This invention consists in the combination of a weighted pendulous foot-lever and toggle-joint, with a punch or die so arranged that the beginning of the downward motion is very rapid, but gradually diminishes in rapidity as it approaches the working point, until at the moment of contact it moves very slowly but with great force, which is further increased by means of the weight.

Claim.—The combination of a weighted pendulous foot-lever, toggle-joint, and slide or die, as hereinbefore set forth.

No. 36,492.—W. H. WILLARD, of Cleveland, Ohio.—*Improved Marine Propeller.*—Patent dated September 16, 1862.—This invention consists in making the wheel in sections of one bucket each, and in making the buckets adjustable on the shaft, so that four or less may

be used and adjusted on the shaft to balance each other, and in case any one should be accidentally broken, the remainder could be adjusted upon the shaft to balance each other. The hub of the bucket is made to pass over the shaft and has cut in it two or more key seats, so that the same key will fit both the hub and shaft.

Claim.—First, making the hub in sections corresponding in number to the number of buckets, each bucket and its section of hub being united and forming one piece, as herein described.

Second, so arranging the key seats in the respective sections of the hub, that these may be adjusted in sets of four, three, or two, as and for the purpose herein set forth.

No. 36,493.—L. J. ATWOOD, of Waterbury, Conn., assignor to HOLMES, BOOTH, and HAYDEN, of the same place.—*Improvement in Lamps.*—Patent dated September 16, 1862.—The lower part of the wick-tube is made flaring or bell-mouthed in order that the wick may be entered more easily. The wick tube is provided with projections near the central part of its outer surface in order to hold it with the ratchet cap and exterior shell of the burner together. The lower end of the spring that secures the glass chimney is attached directly to the side of the wick-tube without solder, the said spring being guided by the cap that contains the ratchet for raising or lowering the wick.

Claim.—First, forming the lower end of the wick tube flaring or bell-mouthed, in the manner and for the purpose specified

Second, the ratchet cap, wick-tube, and exterior shell of the burner, in combination with the projections 6 6 near the middle of the wick tube, and the bell-mouth 5 at the lower end of said wick-tube, whereby the parts are held together as set forth.

Third, fastening the lower end of the spring *h* against the side of the wick-tube without solder, in substantially the manner specified.

Fourth, the ratchet cap *i* with the notch 7 in combination with the wick-tube *e* and spring *h*, for holding the said spring from moving sideways, substantially as set forth.

No. 36,494.—LEWIS GUILD, of Dedham, Mass., assignor to WILLARD EVERETT & CO., of the same place.—*Improved Rollers for Washing Machines.*—Patent dated September 16, 1862.—This invention consists in casting upon an iron shaft a coating of metal of such a nature as will not stain or discolor the clothes when wet, in connexion with collars or heads formed thereupon to secure the wooden roll to the shaft, and to protect the ends of the India-rubber covering which is afterwards applied to the roll.

Claim.—The coating *a* and collars C cast on to the shaft A, whereby the journals are protected from rust and the wooden roll B is secured to the shaft, substantially in the manner described.

No. 36,495.—NATHANIEL JONES, of Homer, N. J., assignor to L. I. MABIE, A. J. MANLEY, and R. H. MORRIS, of New York, N. Y.—*Improvement in Shoe Lasts.*—Patent dated September 16, 1862.—This invention consists in so forming the last and cutting the uppers that the measurement from the point of the toe to the centre at the back shall be as small as or smaller than the measurement at the lower part of the last, and in drawing in the upper part of the last at the back above the heel, for the purpose of causing the shoe to take a bearing upon the upper part and sides of the foot sufficient to prevent motion of the heel within the shoe, and also preventing the uppers from wrinkling.

Claim.—The sectional shoe last *a b c*, formed in the manner specified with the measurement at the line 4, as short as the measurement at the line 6, for the purposes and as specified.

No. 36,496.—ELISHA METS, of Rochester, N. Y., assignor to Himself and P. M. BROMLEY, of the same place.—*Improved Extension Table.*—Patent dated September 16, 1862.—In the upper and lower surfaces of the longitudinally extension bars is a groove in which are fitted corresponding right-angled projections of a metallic slide which serve to sustain the sections and to act as stops to arrest the motion of the intermediate bars at the proper point when drawn out. The edges of the levers are formed, respectively, with a rounded tongue and groove, one edge being provided with a spring hook that engages with a corresponding catch pin in the edge of the contiguous leaf when the leaves are brought together.

Claim.—The short, metallic slides E E resting in grooves *b b* on opposite sides of the extension bars, acting as stops, striking one against the other in extending the table; and the device for joining and locking the edges of the leaves and sections, consisting of the rounded tongue and groove *h i*, catch pin G and spring hook C, the whole arranged together and operating substantially as and for the purposes herein set forth.

No. 36,497.—H. M. WHITMARSH, of Abington, Mass., assignor to Himself, J. O. NASH, and E. D. NASH, of the same place.—*Improved Fastenings for Gaiter Boots.*—Patent dated September 16, 1862.—This invention consists of a gore or tongue piece placed in the opening of the shoe over the instep, and having a cord attached to it upon each edge. This cord is fitted to slide in clamps secured to each edge of the opening in the shoe, so that by pulling down the piece the shoe will become unloosened, and upon pulling up the same the shoe is fastened.

Claim.—The above-described improved boot fastening, consisting of a gore or tongue piece

B, which is drawn down to expose the opening *a b*, and is drawn up again to close and secure said opening, and which piece B is held in place by the ends *i* and clamps *c*, substantially as specified.

No. 36,498.—G. M. ALSOP, of Philadelphia, Pa.—*Improvement in Air Springs.*—Patent dated September 23, 1862.—This invention consists in combining and arranging an inner cup or vessel having a diaphragm bottom, with an outer box which also has a diaphragm bottom, and which receives the pressure of a weight-sustaining piston, the force of the said piston being exerted upon the air vessel which reacts upon the piston with an elastic force; the said box and air vessel being constructed and arranged in relation to each other in such a manner as to have an open space between them on all sides to contain a fluid which also receives the force of the piston, and consequently reacts upon the air and prevents its escape from the air vessel.

Claim.—First, combining and arranging the air vessel E and diaphragm F with the box A, diaphragm B and piston D, the whole being constructed and arranged and operating substantially in the manner and for the purposes set forth.

Second, the combination and arrangement of the buffer H with the air vessel E and plate J, or its equivalent, substantially as described for the purpose specified.

Third, the air vessel I, in combination with the buffer H and air vessel E, substantially as described, for the purpose set forth.

Fourth, the annular projection *c* and corresponding depression *d*, in combination with the flanch *a* and ring C, substantially as and for the purpose set forth.

No. 36,499.—BENJAMIN ARNOLD, of East Greenwich, R. I.—*Improvement in Machines for Making Seine Nets.*—Patent dated September 23, 1862.—This invention does not admit of a brief description.

Claim.—First, the arrangement and combination, substantially as described, of the various implements employed to form a loop, viz., the bar M′, with its row of guides *c c c*, and the bars *l* and *o*, with their pins.

Second, the bar Y, with its double row of pins, for the purpose of holding the netting, as set forth, and when constructed substantially as described.

Third, the combination of the regulating screw or screws *i″*, with the levers *d″* and V′, for the purpose set forth, when arranged substantially as described.

Fourth, the carriage *j* with its row of bars *a a*, in combination with the raceways S S′ and the thread carrier *a′*, when arranged substantially as described, for the purpose set forth.

Fifth, a machine constructed and operating substantially as described, for making a net, whether the knot used in tying the meshes be the "seine" or "weaver's" knot, so called, or the knot commonly known as the "square knot."

No. 36,500.—JOSEPH BANKS, of New York, N. Y.—*Improvement in Rotary Pumps.*—Patent dated September 23, 1862.—This invention relates to that class of rotary pumps in which a piston wheel, containing a series of sliding-spring pistons, moves in the interior of an eccentric case or cylinder, and it consists in the application of keys with dovetailed edges, in combination with the cylinder and with the inner case in such a manner that the said keys catch over the edges of the inner case and hold it firmly in its place, leaving the outer surface of said case perfectly smooth, and in such condition that the same can be turned on a lathe to a true circle and fitted perfectly into the cylinder. With the sliding-spring pistons are combined two spring valves in such a manner as to produce a perfect and yielding joint on the heads of the cylinder. The pistons are constructed of slides, the outer edges of which form semicircular seats for rollers for the purpose of diminishing the friction of the pistons on the inner surface of the cylinder.

Claim.—First, the application of the keys *c*, provided with dovetailed edges *d*, in combination with the inner case E and cylinder A, constructed and operating substantially as and for the purpose shown and described.

Second, the arrangement of the laterally sliding spring valves *h*, in combination with the pistons F, as and for the purpose specified.

Third, the arrangement and combination of the slides *f*, springs *e*, rollers *g*, valve *h*, and piston wheel D, all constructed and operating as and for the purpose set forth.

No. 36,501.—G. C. BIDWELL, of Philadelphia, Pa.—*Improvement in Boilers.*—Patent dated September 23, 1862.—This device consists of a kettle made with a double bottom, a space being left between the two bottoms for the introduction of water or steam. At one side is a tube for supplying water to the space between the bottoms, and at the other is a tube provided with a safety valve. The whole is designed to be readily adapted to a common stove or furnace.

Claim.—The above-described portable steam kettle as a new article of manufacture, the same being a steam-generating double-bottomed kettle provided with a safety valve, substantially in the manner and for the purposes set forth.

No. 36,502.—SAMUEL BLOOD, of Manchester, N. H.—*Improvement in Spinning Fliers.*—Patent dated September 23, 1862.—This invention consists in pivoting the presser arm to a

clamp upon the flyer so as to enable the arm to be readily thrown off from its bobbin when the latter is filled, which may be done by one hand of the operator while the other hand is otherwise employed. Upon the clamp which sustains the said joint are two projections or guides between which the presser arm rests, so arranged as to allow a slight perpendicular motion of the arm on its bobbin, and that, as the bobbin rises and falls, may adapt its delivery to the head of a bobbin and run its roving close to either end. To a projection upon the clamp is secured one end of a spring similar to a watch spring, and coiled around the flyer arm or tube, the other end being attached to a slotted segment upon the flier below the clamp. By tightening or loosening this spring the tension of the presser may be regulated from time to time as may be required.

Claim.—First, the revolving hinge joint in the arm of a presser, for the purposes described.

Second, the guides *s' s* for the arm *x*, constructed substantially as described, whether *x* is used with or without the spring and jointed arm.

Third, the combination of the jointed presser arm *x*, the guides *s' s*, the spring *i*, with its adjustments, and the construction and application of the presser to its flyer, so that the presser shall always be equipoised in the act of winding, substantially and for the purpose herein set forth.

No. 36,503.—O. G. BRADY, of New York, N. Y.—*Improvement in Skates.*—Patent dated September 23, 1862.—This invention consists in securing the heel part of the skate to the shank of the boot by means of a hooked screw portion, which receives an adjusting nut on one end, and a shank plate, which is secured to the shank of the boot for receiving the hooked end of the screw portion. The forward part of the skate is secured to the sole of the boot by means of two laterally adjustable clamps, so arranged as to be readily adapted to soles of different widths or shapes.

Claim.—The arrangement of the shank piece D and heel plate B, with the shank of the boot, runner A and adjustable tightening hook E, as herein shown and described.

No. 36,504.—JOHN M. BRAHN, of Red Bank, N. J.—*Improvement in Machines for Upsetting Tires.*—Patent dated September 23, 1862.—This invention consists in the employment of a clamp and bed plate arranged in such a manner that the heated portion of the tire may, by a single manipulation, be firmly secured in position over the bed plate, so that the former may be hammered down upon the bed plate and contracted as desired.

Claim.—The bed plate A, provided with parallel recesses or slats *a a*, in combination with the bar F, screw rod D and nut E, or an equivalent means to operate said bar, as and for the purpose herein set forth.

No. 36,505.—C. C. BRANDT, of Norwich, Conn.—*Improvement in Revolving Fire-arms.*—Patent dated September 23, 1862.—The invention consists in making the length of the revolving cylinder shorter than that of the cartridge case, (so that the front end of a cartridge, when in a chamber of the cylinder, protrudes in front of it,) and in combining the said cylinder with the barrel by means of mechanism in such a manner that the cylinder is withdrawn from the butt of the barrel prior to its rotation, sufficiently to permit the end of the cartridge to turn, and is moved towards the barrel to close the breech and insert the protruding end of the cartridge into the butt of the barrel, the object being to prevent the escape of smoke or gases at the joint between the cylinder and barrel. The protruding front ends of the cartridges are protected from injury by means of a short revolving cylinder to hold the cartridges, combined with a casing in advance of the said cylinder, to receive their projecting ends. Combined with the lever which moves a sliding revolving cylinder is a mechanism for revolving the said cylinder, so that the lever is caused to move the cylinder longitudinally with the barrel, and also to revolve it, for the purpose of relieving the hammer from the strain of revolving the cylinder. Combined with the lever which moves a sliding revolving cylinder is a punch, so arranged as to enter a discharged cartridge case when the cylinder is moved forward, and loosen the said case from its chamber.

Claim.—The combination of a cylinder shorter than the cartridges with the barrel by mechanism, in such a manner that the cylinder is drawn from the butt of the barrel prior to its rotation, and is moved toward the barrel to insert the front end of the cartridge therein prior to firing, substantially as set forth.

Also, the combination of a cylinder shorter than the cartridges, with a stationary casing, to protect their protruding front ends, substantially as set forth.

Also, the combination of a turning cylinder with a lever by mechanism, in such manner that the said cylinder is both turned and moved toward and from the butt of the barrel by the said lever, substantially as set forth.

Also, the combination of a discharge punch with the lever for moving the cylinder toward and from the butt of the barrel so that the cartridge case is loosened from the chamber by the working of said lever, substantially as set forth.

Also, the construction and combination of the discharge punch with the other members of the fire-arm, in such a manner that said punch performs the double function of discharging the cartridge cases and of locking the cylinder in its proper position, substantially as set forth.

No. 36,506.—JOHN BRUCE, of Brooklyn, N. Y.—*Improvement in Motive Power.*—Patent dated September 23, 1862.—This invention consists in a combination of mechanical devices

employed to communicate continuous or reciprocating motion at any desired speed from a continuously rotating shaft. Upon the said shaft are one or more fixed coupling flanges having a loose pulley upon each side, which pulleys, being alternately coupled to the shaft by an automatic clutch, are caused to draw the alternate ends of one or more levers, by means of which the motion is transmitted to cranks.

Claim.—First, the loose pulleys C *c* C' *c'*, thrown automatically into and out of gear with the flanges D D' upon the shafts E E', so as to receive intermittent motion by the continuous rotation of the said shafts, as explained.

Second, the combinations of the shafts E, clutch gearing *m* N C *c* D, cords or chains G G', and lever H, operating substantially as and for the purposes specified.

No. 36,507.—G. H. CHRISTIAN, of New York, N. Y.—*Penholder.*—Patent dated September 23, 1862.—This invention consists in the employment of a sliding weight furnished at one end with a socket to receive the pen, in combination with a weak spring connecting the said weight with the tubular case in such a manner that when the case is held in an upright position the weight overcomes the power of the spring and the pen protrudes beyond the case, ready for use; but if the holder accidentally drops down, the action of the spring causes the weight to recede and draw in the point of the pen to protect it from injury.

Claim.—First, the arrangement and combination of the tubular case A, sliding weight B, and spring D, constructed and operating substantially as and for the purpose described.

Second, the arrangement of the neck *g*, with inclined shoulders *h h'* on the connecting rod C, in combination with the guide ring E in the interior of the tubular case A, substantially as and for the purpose herein specified.

Third, the arrangement of the inclined plane *e* and recess *f*, in combination with the pin *b*, the sliding weight B, and tubular case A, substantially as and for the purpose set forth.

No. 36,508.—T. S. COX, of Lafayette, Ind.—*Improvement in Sugar-Mills.*—Patent dated September 23, 1862.—This machine is composed of two corrugated rollers, the convex portions of one of which works within the concave portions of the other. Opposite the junction of the rollers is arranged an upright pillar provided with circular openings, and having a knife which divides the openings for the purpose of splitting the cane. The cane is fed into these openings through tubes which are provided with interior springs fitted in such a manner as to bring the cane, at about its centre, in contact with the edge of the knife, and is then confined in proper position by a spring attached to the back of the knife, where it is kept until it enters into the grasp of the rollers.

Claim.—First, the combination of the knife in the upright pillar E*e*, with tubes E, and their interior springs for conducting the cane upon the knife so as to divide the same as near the centre as possible, as and for the purpose herein described.

Second, also in combination with the above first claim, the semitubes F and the springs thereto attached back of the splitting knife, as and for the purpose herein described.

Third, also the combination in a sugar-mill of corrugated rollers with the devices specified in the above first and second claims, as and for the purpose herein described.

No. 36,509.—G. DANIELSON, of Boston, Mass.—*Improvement in Machines for Upsetting Tires.*—Patent dated September 23, 1862.—This invention consists in a method of clamping the tire so that it may be readily adjusted in the machine, and prevented from slipping while being compressed, while at the same time one of the clamps is so arranged as to be capable of being moved under the action of a lever in order to contract the tire. The separate parts of this machine are disclaimed.

Claim.—First, the attaching of the jaws D J to vertical bars E K, one of which passes through the platform B, and the other through the neck piece of the plates L *h*.

Second, the arrangement of the jaws D J, bars E K, levers F M, spring I, and pawls G N, in combination with the stationary ledge C on the platform B, the spring P, lever Q, and the sliding neck piece *f*, provided with the plates L *h*, through which the bar K passes, and to which the lever M is connected, substantially as and for the purpose herein set forth.

No. 36,510.—LINSON DE FORREST, of Birmingham, Conn., assignor to Himself and T. B. De Forrest, of the same place.—*Improvement in Fastening Hoop Ends in Tabs of Bustles.*—Patent dated September 23, 1862.—This invention consists in securing the ends of the bustle hoops to the tabs by means of a peculiarly constructed clasp and eyelet for the purpose of preventing the wear usually occasioned in the tabs by the motion of the ends of the said bustle hoops.

Claim.—Fastening the ends of the bustle hoop in the tabs D' by means of eyelets and eyelet clasps, substantially as and for the purpose herein described.

No. 36,511.—OSCAR DOOLITTLE, of Danville, N. Y.—*Improvement in Ditching Machines.*—Patent dated September 23, 1862.—This invention is designed as an improvement upon a machine for which a patent was granted to the said Doolittle on February 12, 1861, and consists in such an arrangement of the elevator in relation to the scoop, that in depressing and elevating the latter the elevator will require no adjustment as to its length. In the rear of the adjustable elevator is arranged a stationary one for receiving the dirt from the

ported by axles secured to its ends, and so arranged in relation to the same as to permit the

excavation, each being enclosed in a trough to prevent the dirt from falling off. Connected with the scoop and sliding frame are gauge bars, so arranged and applied as to gauge the depth to be cut at each passage of the machine.

Claim.—First, the combination of the articulating frame M with the elevator I and scoop D, as set forth.

Second, the combination of the elevators Q and I, constructed and arranged as and for the purpose herein described.

Third, the gauge rods N N′, in combination with the sliding frame D′, rotating fingers H, and scoop D, as and for the purpose herein described.

No. 36,512.—JOHN DU BOIS, of Williamsport, Pa.—*Improvement in Mode of Building Piers for Bridges, &c.*—Patent dated September 23, 1862.—In carrying out this invention long piles are first driven into the bed of the water, and extend above the surface of the water. Within and between these piles is placed a platform, to the upper side of which is firmly secured a rectangular or other shaped box or tube, which is used to encase the pier to be built and made water-tight. This box or tube forms a section of the coffer dam in which is laid the stone of the solid pier. As the weight of the stone filling causes the section to settle in the water to near its upper edges, an additional section is attached to the first, and so continued until the platform and solid pier rest upon a properly prepared foundation at the bottom or bed of the water.

Claim.—First, building and setting piers by means of a floating coffer dam, substantially as set forth.

Second, the use of the tube, which constitutes the dam, for encasing and strengthening the pier, substantially as set forth.

Third, the guide piles A A, in combination with a floating coffer dam, substantially as and for the purpose set forth.

No. 36,513.—B. W. FRANKLIN, of New York, N. Y.—*Improvement in Securing Teeth to Artificial Base.*—Patent dated September 23, 1862.—This invention consists in providing single and block teeth with a nick or indentation in the ends of the block and sides of the single teeth, with or without a projecting pin, for the purpose of securing a perfect and secret attachment to the artificial base without imbedding so as to cover any portion of the "lingual" surface of the block or single teeth with the artificial base.

Claim.—As a new article of manufacture, block and single teeth provided with the dovetailed nick or indentation A in the sides of the single or ends of the block teeth, with or without the pin B, substantially as set forth and for the purpose specified.

No. 36,514.—H. N. GALLAGHER, of Geneva, N. Y.—*Improvement in Water Wheels.*—Patent dated September 23, 1862.—This invention relates to that class of water wheels which are encompassed by a scroll, and in which the water, after acting upon the buckets, is discharged at both sides of it, or, when the wheel is used in a horizontal position, discharged both at top and bottom; and the invention consists in forming the buckets of radial plates provided with semicircular inner ends, and bodies or sides of a semi-conical form; the buckets being placed in the wheel, which is encompassed by a scroll, all so arranged as to admit of the water being discharged immediately after it has acted upon or against the buckets and without coming in contact with any part of the wheel which will detract from the effect or power of the water obtained by its first impact with the buckets.

Claim.—The wheel A, composed of two rims *a a*, placed at a suitable distance apart and provided with buckets formed of radial plates B, and longitudinal halves C of hollow cones connected with the rims *a a*, and a circular plate D on the shaft C′ of the wheel, as shown in connexion with the scroll D′, all arranged substantially as herein set forth.

No. 36,515.—CORNELIUS GODFREY, of Brooklyn, N. Y.—*Improvement in Extinguishing Fire in the Holds of Ships, Vessels, &c.*—Patent dated September 23, 1862.—This invention consists in the employment of a perforated pipe extending down from a reservoir connected with the galley stove for generating steam to any part of the hold in which a fire should chance to take place, so that the steam may be injected into the fire.

Claim.—The application of a pipe or pipes, with a jet or jets, or perforations, placed in the hold or other parts of a vessel, in connexion or combination with steam generated by or from the use of a galley stove, for the purpose as set forth.

No. 36,516.—RALPH GROW, of Galesburg, Ill.—*Improvement in the Manufacture of Soap.*—Patent dated September 23, 1862.—This invention consists in combining with common soft or hard soap naphtha or oils of distillation from petroleum and coal oil, to which may be added any desirable perfume.

Claim.—The use of hydro-carbons, in the manner and for the purpose substantially as described.

No. 36,517.—ELANDER HEATH, of San Francisco, Cal.—*Improved Spice Mill.*—Patent dated September 23, 1862.—This invention consists in the employment of a cylinder supported by axles secured to its ends, and so arranged in relation to the same as to cause the axles to revolve eccentrically in their journals, and impart to the cylinder a spiral movement. Upon the inner surface of the cylinder are longitudinal corrugations, and within the cylinder are a number of balls of spherical and poly-sided forms.

Claim.—The construction and combination of the cylinder A, describing a spiral movement, together with the balls and bodies *b c*, operating substantially and for the purposes herein set forth.

No. 36,518.—F. C. HEBERHART, of Madison, Ind.—*Improved Meat Chopper.*—Patent dated September 23, 1862.—This invention relates to that class of machines for chopping meat, in which the knives are elevated by mechanism and allowed to fall by their own weight upon a circular revolving block, and the improvement consists in the novel combination and arrangements of the several parts for rendering the machine more substantial and convenient in its operation, as will be understood from the claim and engraving.

Claim.—The combination and arrangement of the knives *e*, rotating block B, pipe P, hoop L, cone K, wheel F, and helical wheel N, substantially as described and for the purpose set forth.

No. 36,519.—JOHN HENFREY, of the United States Army.—*Improved Bedstead.*—Patent dated September 23, 1862.—This invention consists in forming the rails and legs of the bedstead of metal tubes, the said rails being larger than the other tubular parts for the purpose of giving them greater strength, and also to receive and contain the end rails and legs in transporting the same. The opposite ends of each of the end rails are provided with a right and left screw, having square heads, which fit in recesses in rings of cast-iron, and also in the sheet iron side rails, by means of which the parts are firmly secured together. Attached to the side rails is the sacking, which may be tightened or loosened by turning the end rails.

Claim.—First, the side rails of a bedstead so constructed as to receive the end rails and legs, substantially as described for the purpose of economizing space during transportation.

Second, the end rails of a bedstead constructed with right and left hand screws at opposite ends, in combination with a sacking bottom, or its equivalent, substantially as and for the purpose above set forth.

No. 36,520.—W. W. HUSE, of Brooklyn, N. Y.—*Improvement in the Manufacture of Tobacco.*—Patent dated September 23, 1862.—The nature and object of this invention are explained by the claim.

Claim.—In the process of impregnating tobacco with the preparation of licorice subjecting the tobacco, after it has been dipped in the liquid preparation of licorice to the pressure of elastic rollers to force the liquor into the tobacco and to discharge the surplus liquor, substantially as described.

No. 36,521.—ALFRED INGALLS, of Independence Iowa.—*Improvement in Seeding Machines.*—Patent dated September 23, 1862.—The axletree is divided at the centre, and each part is attached rigidly to its respective wheel, so as to turn with it. The axletree passes longitudinally through the seed-box, and is provided at intervals with fins which stir the seed to prevent it from clogging. The bottom of the hopper is provided with a slide, and directly below the openings in the hopper bottom is placed a distributing apron, provided with radial grooves, which serve to spread the seed evenly over the surface of the ground as the machine moves along.

Claim.—The revolving axletrees B B and pins E, in combination with the hopper C, slider F, distributing apron G, and grooves H, when these parts are arranged and operated as and for the purpose specified.

No. 36,522.—ALLEN LAPHAM, of Brooklyn, N. Y.—*Improved Steam Trap.*—Patent dated September 23, 1862.—This invention consists in combining with a steam-engine cylinder a double steam trap for relieving the cylinder of the water of condensation without waste of steam or attendance from the engineer, by means of pipes extending from the lowest point of each end of the cylinder and leading to the trap. The latter is composed of a metal shell having a steam-tight cap and a partition across its centre, and provided with channels, valves, and floats, so that as the condensed water is passed through the pipes into the trap the floats are caused to rise and lift the valves in proportion to the accumulated amount of water, which is then allowed to pass out of the discharge pipe automatically, without any escape of steam.

Claim.—The combination with a steam engine cylinder of a double trap, constructed and operating substantially as described and for the purpose set forth.

No. 36,523.—T. R. MARKILLIE, of Winchester, Ill.—*Improved Washing Machine.*—Patent dated September 23, 1862.—Within a properly-constructed box is a block C, having a grooved or corrugated face, and attached to arms pivoted at their upper ends to the sides of the box. Opposite to this block or swinging squeezer is a perforated squeezer F having a smooth surface, and pivoted at its upper ends to a lever which is connected by another lever

and arm to the swinging block. The squeezer F is attached at its lower end to a brace or stay provided with holes to fit over a pin, so as to allow the squeezer to be adjusted towards or from the block C. Corresponding notches and a pin are also provided for adjusting the upper end of the squeezer F. At the front of the machine is arranged a grooved roller, in which is fitted to work a corresponding disk or roller, upon the bearings of which acts a spring; the said rollers serving to squeeze the water from the clothes.

Claim.—The combination of the swinging squeezer C with the adjustable squeezer F, both being arranged, constructed, and operated in the manner and for the purposes set forth.

Also, the method herein described of adjusting the squeezer F, and of operating the same so as to adapt the machine to wash a large or small quantity of clothes, as set forth.

Also, the arrangement and combination of the grooved roll M and spring O, the whole operating in the manner and for the purposes substantially as herein set forth.

No. 36,524.—J. A. MINOR, of Hartford, Conn.—*Improvement in Sash Fasteners.*—Patent dated September 23, 1862.—This invention consists in the employment of a cam provided partly with a smooth and partly with a serrated edge, and is confined in a suitable case, which is attached to the window casing by a screw upon which it turns, and is retained in one of two positions, for locking the sash in an open or closed condition, respectively, by means of a spring which acts upon one or other side of a protuberance on the cam, according as it is desired to have the window sash held in an open condition or locked when closed.

Claim.—The cam A, having a serrated face *b*, square end *c*, and protuberance *e*, in combination with the spring *d* and notch *f*, when the whole is constructed and arranged to operate in the manner specified.

No. 36,525.—G. W. PENNISTON, of North Vernon, Ind.—*Improvement in Hay and Hemp Presses.*—Patent dated September 23, 1862.—The falling doors consist of a series of lids or panels placed in the upper part of the press, and confined by the rabbeted edges of the side pieces. Under the bale is a concave or semicircular chamber to facilitate the passing of the hoop or tie around the bale when the latter is pressed.

Claim.—The falling doors, figure 2, letter I, in connexion with the slide pieces, figure 1, letters F F.

Also, a number of concave cylinders, figure 3, letter L, for passing the hoop or tie around the bale, which saves the time and labor of making a pit and working under the press-box

No. 36,526.—OVID PLUMB, of Millport, N. Y.—*Improved Canal-boat Propeller.*—Patent dated September 23, 1862.—Extending underneath the whole length of the centre of the boat is an enclosed longitudinal space for the passage of the water, over the centre of which is arranged a paddle-wheel, and leading from said passage on either side, longitudinally of the paddle-wheel, is a water-way, passing around laterally and opening at the side of the wheel case, so as to receive the centrifugal action of the water acted upon by the wheel. The passage and water-ways are provided with an adjusting gate or valve in front and in the rear of the wheel, for the purpose of deflecting the water from the central passage-way to one side of the wheel, and allowing its discharge at the other side, so as to admit of the boat being moved in either direction.

Claim.—The side water-way or ways G, connecting with the main enclosed passage B on either side longitudinally of the paddle-wheel, and opening into the wheel chamber D by the passage *b* in such a manner that the water admitted therein is carried around by the paddle-wheel, thus producing a centrifugal action and escaping at the rear, the whole arranged and operating substantially as herein described.

Also, covering the openings of the water-way or ways G, leading from the main water-passage, by the hinged adjusting valves or gates H H, so that the water may be deflected in at either end of said way or ways and discharged into the chamber D, and thence out through the opposite end of the main passage, to adapt the boat to running in either direction, combined and operating substantially as herein set forth.

No. 36,527.—N. Z. POTTER, of Uniontown, Ill.—*Improved Sugar Evaporator.*—Patent dated September 23, 1862.—This invention consists in the arrangement of two flues, one under each of the finishing pans, in combination with three dampers, two in front of the flues and one in the chimney, in such a manner that by adjusting the said dampers the heat can be made to pass through either flue at pleasure. Under the forward pan is placed a shelf, which protects a portion of the pan against the heat of the fire, and causes the scum to accumulate at one end of the pan, so that it can be easily removed.

Claim.—First, the arrangement of the double flues G G′, pans B B′, and dampers I I′, in combination with the oscillating damper *l* in the chimney, constructed and operating as and for the purposes set forth.

Second, the shelves *r* between the fire and the bottom of pan A, as and for the purpose specified.

No. 36,528.—H. W. PUTNAM, of Cleveland, Ohio.—*Improved Key and Corkscrew for Bottle Fasteners.*—Patent dated September 23, 1862.—This device is designed to be used in

connexion with the cork fastener, for which a patent has been granted to the said Putnam; and the invention consists in attaching two arms to the shank of a corkscrew at right-angles with the same, and so as to pass each side of the cork, the ends of the said arms being bent inwardly, to enable them to engage with the wire fastening and release it from the cork.

Claim.—The arms C C and nibs D D, in combination with a corkscrew, constructed and operating as and for the purpose herein set forth.

No. 36,529.—RENSSELAER REYNOLDS, of Stockport, N. Y.—*Improvement in Looms.*—Patent dated September 23, 1862.—This device is designed to be applied to let off motions in looms in which an oscillating whip-roll, or its equivalent, is employed. The invention consists in the employment of a roll arranged in a position below and at some distance in rear of the whip-bar, where it is supported by its journals being fitted to fixed bearings in brackets secured to the sides of the loom, and where the yarn on its way from the beam to the whip-bar will pass behind and in contact with it, so that a given tension of the yarn will always have the same effect upon the whip-bar or whip-roll, and the letting off will be uniform, whatever may be the quantity of yarn upon the beam.

Claim.—The roll E applied in fixed bearings entirely independent of the whip-bar or whip-roll, and in relation to the said bar or roll, substantially as herein described and operating as set forth.

No. 36,530.—M. A. RICHARDSON, of Sherman, N. Y.—*Improvement in Cream Pumps.*—Patent dated September 23, 1862.—This device consists in the employment of a pump provided at its lower or induction end and at the inner end of the spout with a series of screens of different degrees of fineness, through which cream is forced by the operation of the piston and valves, for the purpose of breaking and thoroughly disuniting the particles of cream that collect upon the surface of the milk previous to its being churned.

Claim.—The use of the wire screens M and K, or their equivalents, in combination with the spout G, valves H and I, pump stock C C, lever F, and piston E, in the manner and for the purposes specified.

No. 36,531.—B. S. ROBERTS, of the United States Army.—*Improvement in Breech-Loading Fire-arms.*—Patent dated September 23, 1862.—Hinged to the rear upper end of the barrel is a lever, to the under side of which is attached a wedge provided with a slot that allows it a limited longitudinal motion upon a pin fitting in the slot. The rear end of the wedge, when in a closed position, abuts against a shoulder, which is slightly bevelled, so as to press the forward end of the wedge closely against the base of the cartridge case, when the latter is inserted in the rear end of the barrel.

Claim.—First, in a breech-loading gun, in which the breech is opened and closed by the partial revolution of a lever around a centre, the use of a sliding wedge, working in combination with the lever when such wedge has a longitudinal motion, which is radial to the centre of revolution of said lever, substantially in the manner and for the purpose above set forth.

Second, the combination of the lever *b*, the wedge *a*, and the shoulder *c*, when operating in the manner and for the purpose above set forth.

No. 36,532.—JOHN ROBINSON, of Hobart, N. Y.—*Improvement in Ploughs.*—Patent dated September 23, 1862.—The beam of the plough is attached to the land side thereof in such a manner as to enable the beam to be capable of being adjusted—first, vertically and bodily in a horizontal position; secondly, to admit of the point or end of the beam being raised or lowered; and, thirdly, to allow a lateral adjustment of the beam either to the right or left.

Claim.—Having the rear portion of the beam E made to fill or cover that portion of the land side between the handles D and the mould-board A, in combination with the triple adjusting slots *b*, bolts *c*, and land side C, as and for the purpose herein shown and described.

No. 36,533.—JOSEPH ROBISON, of Potter Center, N. Y.—*Improvement in Machines for Upsetting Tires.*—Patent dated September 23, 1862.—A in the engraving represents a base plate made of iron and of segmental form, and provided with a flange on either side. To the outside of the base plate is pivoted a roller provided with holes, in which are fitted the ends of connecting rods, the other ends of the rods being attached to sliding clasps which encompass the ends of the base plate.

To the inside of the clasp are secured the divided ends of a band that surrounds the tire, the size of the band being made adjustable by passing the ends opposite the base plate through a clasp provided with a set screw. By drawing the clasps upon the base plate together over the heated portion of the tire, the latter is caused to be shrunk to the size required.

Claim.—First, the plate A, when made as specified.

Second, the band F, when made as specified and used for the purpose set forth.

Third, the roller B, clasps C and C, and connexions D and D, when constructed and arranged as and for the purpose specified.

No. 36,534.—N. C. SANFORD, of Meriden, Conn.—*Improvement in Augers.*—Patent dated September 23, 1862.—This invention consists in providing the auger with supplemental lips or cutters formed on the ends of the auger in such a manner as to enable the auger to cut transversely of the grain and serve as bearings to keep the same in proper position, thus preventing it from being deflected from a true course.

Claim.—The supplemental lips or cutters *d d* in combination with the lips or cutters *b* and spur or screw *c*, all constructed and arranged substantially as shown, to form a new and improved implement or auger for the purpose specified.

No. 36,535.—JACKSON SHANNON, of Freeport, Ill.—*Improvement in Seeding Machine.*—Patent dated September 23, 1862.—The frame of the machine is supported in front upon two caster-wheels attached to a cross-bar which is connected to the side beams by means of boxes or guides, in such a manner as to enable a vertical motion to be imparted by a lever, so that the depth to which the seed is deposited may be regulated; and by depressing the cross-bar the frame is raised to throw the working parts out of the ground when the machine is to be turned or not in operation.

The hind wheels are secured to the side beams in such a manner as to admit also of vertical adjustment.

Suspended from a bar or chain hooked upon an arm extending from the upper edge of the hopper, and from a hook and eye projecting from the centre of the lower front edge of the hopper bottom, is a distributing board, to the under side of which is attached a weight which serves to keep the same level upon different grades of ground.

To the rear ends of the side beams are secured three double-coned covering and smoothing rollers turning loosely upon an axle secured in boxes attached by means of a swivel to hangers connected with the beams.

Claim.—First, the arrangement of the vertically-sliding bar E and vertically-adjustable axle G in combination with the caster wheels C, wheels D D′, and frame A, all constructed and operating as shown and described.

Second, the arrangement of the balance weight *h′* in combination with the distributing board L, as and for the purpose described.

Third, the arrangement and combination of the swivel boxes *d* 2, *c* 2, axle S and conica. rollers R, as and for the purpose specified.

No. 36,536.—A. F. SMITH, of Norwich, Conn., and WEBSTER WAGNER, of Palatine Bridge, N. Y.—*Improvement in Ventilating Railroad Cars.*—Patent dated September 23, 1862.—In the centre of the roof of the car is a recess or opening extending nearly its whole length. In the sides of this recess are a series of openings provided with sliding shutters, and at each side of the same is a continuous chamber having corresponding openings provided with swing shutters which may be adjusted at any angle, and which serve as deflectors to exhaust the air from the car during the motion of the latter.

Claim.—First, receiving the air from the interior of the car into the space under the longitudinal elevated portion of the roof, and exhausting it from thence by deflectors through openings uniformly distributed at the sides of such elevated position, for the purposes set forth.

Second, the combination and arrangement of the exhausting devices, or their equivalents, in the sides of an elevated central portion of the roof, and separately adjustable apertures near the top of the sides of the car for the admission of fresh air, substantially in the manner and for the purpose herein set forth.

No. 36,537.—W. T. SPENCE, of St. Louis, Mo.—*Improved Fan Attachment for Sewing Machines.*—Patent dated September 23, 1862.—This invention consists in connecting a fan to the treadle of a sewing machine in such a manner that the movement of the treadle in operating the machine will give motion to the fan so as to fan the operator.

Claim.—The lever and fan applied to a sewing machine, and arranged so as to be operated from the treadle thereof, substantially as herein set forth.

No. 36,538.—GREENLEAF STACKPOLE, of Portland, Maine.—*Improvement in Bit Braces.*—Patent dated September 23, 1862.—One-half of the socket which holds the shank of the bit is hinged to the body of the brace that forms the other half, and upon the interior of the socket are two projecting bearings. These bearings have V-shaped grooves to conform to the taper of the bit shank so as to accommodate bits having shanks of different sizes. A ring is made to slip over the two parts of the socket when closed to hold the bit in place.

Claim.—First, forming the socket of a bit brace with bit shank bearings C C′, substantially as and for the purpose set forth.

Second, so forming the bearings C C′ that the lesser grooves therein may be made to receive more than one-sized bit shank without an enlargement of the grooves to the extent of the whole length of the socket or the bit shank, substantially as specified.

Third, in combination with a divided bit-shank socket having bearings C C′, as specified, the ring E for holding said bearings upon the shank with a solid unyielding impact at two points of its length, substantially as set forth.

No. 36,539.—R. M. STIVERS and G. W. V. SMITH, of New York, N. Y.—*Improvement in Shifting Carriage Tops and Backs.*—Patent dated September 23, 1862.—Extending over the length of the seat, and partially across each end of the same, is a metallic rail C, from the lower inner side of which project standards or supports provided with feet with screws underneath, by means of which, in connexion with a thumb nut, the standards are secured to the seat frame so as to admit of the top and rail being attached and detached without the use of a wrench.

Claim.—The shifting rail C having two or more supports *d*, feet *c*, and screw or bolt ends *b* rigidly welded thereto or forged therefrom, in combination with the seat frame A and nut *e*, substantially as and for the purposes set forth.

No. 36,540.—J. M. and R. M. THOMPSON, of Coshocton, Ohio.—*Improvement in Lifting Jacks.*—Patent dated September 23, 1862.—This device consists of an upright standard, through the lower part of which passes a lever. The shorter end of the lever supports an iron bar, upon which is fitted a grooved box held in position by a guard above. The iron bar is provided with perforations so as to adjust the box, by means of a pin, to the required height of an axle. On the opposite side of the standard from the box is hinged a pawl or latch which engages at its free end in teeth upon the lever.

Claim.—The combination with the standard B of the lever C, perforated bar F, groove box E, and self-adjusting latch D, as and for the purposes herein described.

No. 36,541.—B. T. TRIMMER, of Rochester, N. Y.—*Improvement in Scouring and Cleaning Grain.*—Patent dated September 23, 1862.—The screw scourers are placed upon a shaft within the scouring case, and are provided with openings for the passage of air and with teeth projecting from their sides near the ends. At one end of the scouring case, and forming a part of it, is placed a conical hulling case, in which is a correspondingly-shaped rubber having strips of leather, rubber, steel, or other elastic material inserted or screwed upon it so as to admit of their being moved out to compensate for wear. Upon the inner surface of the scouring case are a series of grooves or indentations with openings for the purpose of allowing the escape of dust and other impurities. At the end of the lower side of the conical case are openings for the grain to pass out, which then enters a pipe leading to the lower end of the suction pipe, where it comes in contact with a current of air which is drawn up through the pipe into the chamber to the fan-blower.

Claim.—First, the screw scourers with pins or teeth projecting from their sides, and holes through the body for the circulation of air.

Second, the conical huller or rubber, having strips of leather, India-rubber, steel, or other elastic material inserted or screwed on, so as to be moved out to compensate for wear

Third, the undulating indentations in the scouring case, running in the direction of the circumference, with openings in the bottom for the escape of dust and other impurities.

Fourth, the arrangement of the pipes and chamber for the separation of matter after the hulling process.

Fifth, the combination of scouring, hulling, and separating, in the manner described, in one operation.

No. 36,542.—WILLIAM N. WALTON, of New York, N. Y.—*Improvement in Attaching Labels to Bottles.*—Patent dated September 23, 1862.—This invention consists in forming the bottle with either a recess or raised portion upon its side of the shape of the required label, and surrounding the same with a rim or ledge to prevent any fluid, as it flows down the sides of the bottle, from coming in contact with the label.

Claim.—Shaping the bottle, whether in *relievo* or *intaglio*, so as to correspond with the label or inscription plate B, substantially as and for the purposes set forth.

Also, the arrangement of the lip or ridge *a*, whether distinct from or making a part of the cavity for the plate B, for the purpose of preventing acids, oils, &c., from entering between the label plate and the bottle, substantially as described.

No. 36,543.—ASHER WARNER, of Cleveland, Ohio.—*Improvement in Animal Traps.*—Patent dated September 23, 1862.—This trap is constructed in such a manner as to admit of its being graduated and set to catch any desired number of small animals, such as rats or mice, that may collect therein, the platform upon which they stand being balanced by a weight, so that when a sufficient number have gathered together the weight will rise and spring a trigger which will cause the door to close firmly.

Claim.—The herein-described construction of a trap, having a movable platform B, with a graduated lever E, and weight D, or their equivalents, in combination with the trigger I, and door K, operating substantially as and for the purpose set forth.

No. 36,544.—LEWIS WATSON, of Canton, Mich.—*Improvement in Wood-Sawing Machine.*—Patent dated September 23, 1862.—This invention consists in the arrangement of a series of devices named in the claim, for the purpose of sawing wood, whereby logs of any size and length placed upon the carriage of the machine may be moved by the saw and cut to any desired length. The separate devices are disclaimed.

Claim.—First, the combination of the arrangement for feeding the log to the saws, consisting of the shaft M, pulley N′, band *b*, pulley *d*, pinion wheel and shaft C, vibrating post 2′, cog-wheel *a*, circle *c*, trundling rod B′, cylinder A′, chain 14, and slide *o*′, and of the lever Y, and weight *h*, with the arrangement for driving the saw G, consisting of the crank pulley A, pitman *x*, and stock *f*, when constructed and operating substantially as and for the purpose shown and described.

Second, the combination of the arrangement for feeding the log to the saws, the lever Y, crank pulley A, and belt pulley Fig. 3, with the swinging frame W, consisting of the belt pulleys 3 3 3′ 4 4, the belts 2 2 6′, the balance wheel 11 and its shaft, and the saw 5 and its arbor, when constructed and operating substantially as and for the purpose shown and described.

No. 36,545.—S. B. WILLIAMS, of Baresville, Ohio.—*Improvement in Smut Machine.*—Patent dated September 23, 1862.—This invention consists in the employment of a series of suction blast spouts, a fan, and a beating and scouring device, arranged in such a manner that the grain will, in passing through the machine, be subjected to different blasts successively at different stages of the cleaning process from one and the same fan. The beater is formed of two or more sets of radial arms, through which, near their ends, pass vertical rods having their lower ends fitted into the upper surface of a circular scourer, which latter, with the beater, is encompassed by a case or shell. The upper part of the shell is of cylindrical form, and has a series of vertical stationary rods fitted within it adjoining its inner side, by which means the grain is cleansed and freed from all dirt and smut.

Claim.—The suction spouts L M N O, when arranged and combined with a fan case B, beater F, scourer G, and shell H, to operate as and for the purpose herein set forth.

Also, the particular arrangement and combination of the vertical rotating rods *b* of the arms *a*, and the stationary rods *d* of the shell H, with the conical scourer G and the lower conical part of the shell H, to form a new and improved beating and scouring device, for the purpose specified.

Also, the combination of the blast spouts, fan, fan case, and beating and scouring device, when all arranged for joint operation as and for the purpose herein set forth.

No. 36,546.—W. W. W. WOOD, of Philadelphia, Pa.—*Improved Defensive Armor for Ships and Other Batterics.*—Patent dated September 23, 1862.—This invention will be understood by reference to the claim and engraving.

Claim.—The armor, composed of the series of inner plates B and outer plates D, the former being secured to the vessel by bolts, whose heads are covered by the outer plates, each plate of one series having a rib fitting between ribs on one of the plates of the other series of plates, the two series of plates being secured to each other by pins *e* passing through the said ribs, the plates and ribs being so constructed that there shall be, at intervals between the inner and outer plates, a series of longitudinal spaces, for the introduction of strips of wood or other equivalent material, and the whole being arranged as and for the purpose herein set forth.

No. 36,547.—G. C. WORTH, of Upper Sandusky, Ohio.—*Improvement in Locks.*—Patent dated September 23, 1862.—This lock is formed of a lever weighted at one end, and provided at the other end with a leg extending down and entering loosely by a ball and socket joint in the upper edge of the bolt, so that the weighted end of the lever will always tend to keep the bolt projected from the lock. Over a concave seat in the weighted lever is arranged a quadrantal cam, so formed that when turned down it acts upon the lever like a wedge, and serves to hold it in place, and thus lock the bolt. The cam is provided with a thumb piece or latch, so arranged as to hold the cam off its seat when required, and prevent the bolt from being accidentally locked, or to lock it so as to prevent it from being picked or unlocked from the outside, even with the proper key.

Claim.—First, the combination of the cam E and weighted lever C, when constructed and arranged as set forth.

Second, the latch or cam *g*, in combination with the cam E and its projection *f*, substantially as and for the purpose set forth.

No. 36,548.—PAUL PRYIBIL, of New York, N. Y., assignor to GEORGE SCHEIFFELE, of the same place.—*Improved Machine for Cutting Crystals.*—Patent dated September 23, 1862.—This invention consists in the arrangement of an adjustable inclined revolving shaft carrying a suitable clamp for the crystals, in combination with a grinding stone revolving on a horizontal shaft in such a manner that by changing the inclination of the clamp shaft the position of the clamp is adjusted according to the size of the stone, and according to the size and shape of the crystal to be cut, thus enabling each stone to be used up and down to the flanges which secure it to the shaft.

In combination with the frame which forms the bearings for the clamp shaft, and to which a sliding motion can be imparted towards and from the grinding stone, is a gauging screw, so arranged that the clamp can be adjusted to different sizes of crystals.

In connexion with the above is a tipping head provided with two or more set screws, and

with a guideway for the frame of the clamp shaft, so that by raising or lowering the rear end of the tipping head the clamp is moved towards or from the grinding stone, and the crystal be made to bear on the stone at the most desirable angle.

In combination with the rotary shaft are two globe-shaped elastic pads, between which the crystal is clamped and prevented from being broken, the correct position of the crystal between the pads being determined by means of a curved flat spring.

Claim.—First, the arrangement of the adjustable inclined revolving shaft E, carrying the clamp D D′ in combination with the stone A, rotating on the horizontal shaft B, constructed and operating in the manner and for the purpose specified.

Second, the arrangement of the gauging screw *g*, in combination with the frame F, and with the adjusting screw *f*, as and for the purpose described.

Third, the arrangement of the tipping head H, with two or more set screws *y*, in combination with the sliding carriage F′, attached to the frame F, the whole constructed and operating as and for the purpose set forth.

Fourth, the arrangement of two globe-shaped elastic pads D D′ in combination with the rotary shaft E, and pivot E′, constructed and operating in the manner and for the purpose shown and described.

Fifth, the employment of the curved spring *e*, in combination with the elastic pads D D′, substantially as and for the purpose specified.

No. 36,549.—J. W. BRYANT, of Welake, Florida, assignor to L. A. OSBORN, of Newark, N. J.—*Improvement in Caps.*—Patent dated September 23, 1862.—This invention is explained by the claim and engraving.

Claim.—A cap formed of woven wire, adapted to be worn without other covering, and also to receive such covering as the vicissitudes of the season or the vocation or taste of the wearer may require, all substantially as described.

No. 36,550.—J. C. MILLAR, of Troy, N. Y., assignor to Himself and R. D. CUNNINGHAM, of the same place.—*Improvement in Gig Mills.*—Patent dated September 23, 1862.—This invention consists in so constructing a napping roller for napping the back side of the cloth or blankets, conjointly with napping the face side by the napping cylinder, that the lengths of card or teasel points acting upon the blankets or cloth, may be regulated from the full length of the point to any smaller length, or the action of the card or teasel points, when desired, may be wholy excluded from action on the surface of the cloth, by means of regulating rods.

The drawing rollers are provided with adjustable bearings for the purpose of regulating the tension of the rollers on the cloth to the proper amount required for drawing the cloth over the napping cylinder.

Claim.—First, the back side napping roller F, constructed substantially in the manner as herein described and shown, and operating in the manner and for the purposes as herein specified.

Second, in combination with the napping cylinder B, the adjustable drawing rollers K K′ K2 when the rollers K′ K2 are constructed with adjustable bearings, and arranged substantially in the manner as herein shown and described, and operating as set forth for the purpose of regulating the degree of tension on the cloth drawn over the napping cylinder in the manner as herein specified.

Third, in combination with the improved napping cylinder B, having either a direct or reverse revolution, at will, as herein described, the general arrangement of the adjustable rollers E E′, the back-side napping roller F, the stretching rollers J or Z, the adjustable drawing rollers K K′ K2, and the auxiliary drawing roller V, for the purpose of napping blankets and both sides of the cloth together, or at one operation, and raising the nap longitudinally in both directions, direct and reverse, without the necessity of shifting the cloth in the machine by hand, end for end or side for side, before such operation can be completed.

No. 36,551.—CHARLES BEACH, of Penn Yan, N. Y., assignor to Himself and S. C. CLEVELAND, of the same place.—*Improvement in Machinery for Preparing Hemp and Flax for Carding.*—Patent dated September 23, 1862.—This invention is designed as an improvement upon a machine for which a patent was granted to Charles, Joseph, and Thomas Beach, and Mowry, on the 29th of August, 1848.

The object of this invention is to prepare flax, hemp, and other similar stalks having a long fibre, from its rough or unbroken state, in such a manner as to be carded, spun, and woven like cotton and wool; to the accomplishment of which, the fibre is to be thoroughly separated from the woody portion of the stalk, and broken into short pieces or lengths for proper manipulation, by subjecting it first to the action of two sets of saws, one set revolving at a greater velocity than the other. The stalks are then placed in a revolving trough in which are fitted wooden rollers arranged to be adjusted vertically.

The circular trough is encompassed by a perforated cylinder, and midway between the pressure rollers are arranged smaller rollers, provided with teeth or projections for the purpose of stirring the material after the rollers have passed over it.

Claim.—The two sets of saws E E and F F, running at unequal rates of speed, when the same intermatch as described for the purpose of breaking the stalks and fibres without cutting them abruptly, substantially as herein set forth.

Also, the pressure rollers L L, having their bearings M M resting in the guide supports N N, and adjustable to different degrees of pressure, and yielding to inequalities of the material to be acted on by means of the spring *m* and screw O, the whole arranged in combination with the trough K, substantially as herein described.

Also, the perforated cylinder Q, in combination with the circular trough K, for the purpose of retaining the filaments, while the shives and dust are allowed to escape, substantially as herein set forth.

Also, in combination with the perforated cylinder Q, the pickers P P, whereby the blast created by the latter removes the trash without the fibres, substantially as herein specified.

No. 36,552.—S. R. SMITH, of Cincinnati, Ohio, assignor to LANE & BODLEY, of the same place.—*Improvement in Head Blocks for Circular Saw-mills.*—Patent dated September 23, 1862.—The block or base piece in this machine is made of wrought-iron, and the knees of the head blocks are operated in such a manner that the log may be accurately adjusted to the saw; any variation in the rack being compensated for by a slight adjustment of parts, so that both knees of the carriage may be adjusted simultaneously and with an equal movement. The rack is connected to the base piece by means of a dovetail projection on a neck of the base piece on which the knees slide, so that the base pieces will not be weakened by being perforated with holes, as in the usual method.

Claim.—First, a head block for saw-mill carriages, provided with a block or base piece B, of wrought-iron, substantially as set forth.

Second, connecting the rack C to the block or base piece B, by means of a dovetail rib or projection *b* on the neck *a* of the block or base piece, and fitted in a recess *c* in the back surface of the rack, substantially as described.

Third, the combination of the arms D H, cranks F G, and slide bar I, arranged in connexion with the lever J and stops *f f* in the plate L, for actuating the rack C and knee O, as specified.

Fourth, securing the crank G to the arm H by means of the bolt *b'*, fitted in the oblong slot *a'* of the arm H for the purpose of varying the length of crank G, and equalizing the movement of the knees O, as set forth.

No. 36,553.—FRANCIS ALGER, of Boston, Mass.—*Improvement in Combined Time and Percussion Fuze for Shells.*—Patent dated September 30, 1862.—This invention consists in combining in one fuze case a charged plunger and a time percussion fuze. The fuze case is freed from the gases produced by the burning of the time fuze by means of holes and grooves in the head and plunger whence the gases pass into the space between the disks; and opening into this space are holes V drilled through the upper rim of the fuze case, so that, as the shell passes through the atmosphere, a partial vacuum will be made around the mouths of these apertures, and thus exhaust the interior of the fuze case. Through the sides of the fuze case are small holes, into which are fitted plugs or metallic cores, which latter are forced out when the plunger is exploded, leaving a passage for the flame through the fuze case into the shell.

Claim.—First, the combination in one fuze case or stock of a charged plunger and a time percussion fuze.

Second, the apertures *v v*, substantially as and for the purpose specified.

Third, the plugged holes *m m* through the sides of the fuze case for the purpose of transmitting fire to the interior of the shell, substantially as described.

No. 36,554.—WILLIAM BALLARD, of Homer, New York.—*Improvement in Grain Drills.*—Patent dated September 30, 1862.—In this machine the drills are firmly attached in pairs to the vibrating bars *n*, which bars are pivoted at their centres to a bar extending across the machine and provided with an elbow at each end, which elbows are hinged by pivots in a perpendicular slot to short cross-pieces attached to the under side of the axle, whereby each pair of drills is allowed to operate separately and to vibrate sidewise, and the whole to rise and fall so as to adapt themselves to the inequalities of the ground.

Claim.—The manner of attaching the drills upon a vibrating bar *n* to the adjustable bar *q*, and the peculiar construction of said bar *q*, with elbowed or crooked ends, and the manner of supporting it by a pivot working in a slot, the whole to be used in combination as above set forth.

No. 36,555.—J. L. BONHAM, of Hellen, Pa.—*Improvement in Revolving Ordnance.*—Patent dated September 30, 1862.—This invention consists of a many-chambered cylinder revolving in a bed adapted to swing on trunnions in a swivelled frame. Fitting loosely in a recess in the periphery of the cylinder is a band, to which is rigidly attached a lever. Wedge-shaped recesses are also formed in the periphery of the cylinder to receive a pawl. The cap is exploded by a hammer operated by a trip depending from the aforesaid band. At the rear of the bed is arranged a knife, which, as the cylinder is rotated, is caused to cut the end of the cartridge.

Claim.—First, the combination of the revolving many-chambered cylinder H, swinging bed G, and swivelled frame D, constructed and operated in the manner and for the purposes set forth.

Second, the knife N, in combination with the cylinder H, when arranged to operate in the manner and for the purposes set forth.

Third, the combination of the cylinder H, lever J, pawl L, trip Q, and hammer P, when arranged to operate in the manner and for the purposes set forth.

No. 36,556.—ANDREW BUCHANAN, of Jersey City, N. J.—*Improvement in Valves for Steam Engines.*—Patent dated September 30, 1862.—This invention relates to a method of transferring a portion of the pressure produced by the steam on the back of the valve to a series of rollers arranged to run upon tracks within the valve chest; and it consists in a certain construction and arrangement of devices for adjusting the tracks upon which the rollers run, and also in a means of combining the rollers with the valve and adjusting them relatively thereto.

Claim.—First, the employment, as ways for the valve rollers to run upon, of bars adjustable by screws, substantially as herein specified.

Second, combining the roller axles with the valve, by means of recesses *i i* in the bars I I, or their equivalents, attached rigidly to and projecting over the ends of the valve, substantially as and for the purpose herein specified.

Third, the set screw *j j*, applied in combination with the bars I I, or their equivalents, and the roller axles, substantially as and for the purpose herein specified.

No. 36,557.—A. B. CROSBY, of Green, Maine, and JESSE LADD, of Boston, Mass.—*Improved Machine for Collecting and Amalgamating Fine Particles of Gold.*—Patent dated September 30, 1862.—This invention consists in placing near the bottom of a vessel a perforated diaphragm or partition, from the centre of which arises the induction pipe, through which latter the gold-bearing material passes, and all so arranged that said material will be caused to pass up through the diaphram and through the quicksilver above the surface of the diaphragm and thence to the eduction chamber.

Claim.—The application of a perforated plate diaphragm or partition, in the manner above described and for purposes above specified.

No. 36,558.—W. H. CROSBY, of Washington, D. C.—*Improvement in Boilers for Culinary Purposes.*—Patent dated September 30, 1862.—Attached to the under side of the lid of a pot or boiler, which contains the meat or vegetables to be boiled, are three slides, operated by means of a latch at the centre of the lid, which latch presses flanges connected with the lid against flanges on the rim of the boiler so as to form a steam-tight joint, as the metal expands by reason of the heat.

I claim the slides E2 E2 E2, operated by the latch F2, when combined with a boiler for culinary purposes, constructed and operating substantially as described.

No. 36,559.—LYMAN DERBY, of New York, N. Y.—*Improvement in Attaching Thills to Axles.*—Patent dated September 30, 1862.—Antedated August 19, 1862.—This invention consists in securing the thills and poles of carriages to the axle by means of a screw bolt secured at one end of a centre pin passing through ear pieces formed on the end of the thill irons, and inserted through a mortise hole in the jack, so that by tightening up the screw nut on the lower end of the bolt the thills will be firmly held in contact with the jack, and as the parts in contact wear away they will be prevented from rattling without the intervention of any rubber or other packing.

Claim.—First, the longitudinal arrangement of the bolt E, with reference to the thills, in combination with the thill irons B, substantially as described and for the purposes hereinbefore set forth.

Second, the jack, having a mortise longitudinally through it, in combination with the bolt E and the thill irons B, substantially as described and for the purposes hereinbefore set forth.

Third, the use of the recess H, formed in the sides of the mouth of the mortise in the jack, substantially as described and for the purposes hereinbefore set forth.

No. 36,560.—M. L. DICKINSON, of West Troy, N, Y.—*Improved Whisk Broom.*—Patent dated September 30, 1862.—This invention is explained by the claim and engraving. I claim as a new article of manufacture a whisk brush, constructed of the brush fibres only of broom-corn whisks, and a wooden core C, the broom-corn fibres *b*, being bound upon the wooden core, and forming the whole outer portion of the handle I, of the brush, as herein described and shown by the annexed drawings.

No. 36,561.—C. H. and W. G. DOWD, of Scranton, Pa.—*Improvement in Machines for Seaming Metal Roofing.*—Patent dated September 30, 1862.—This invention consists in arranging the bearings of the burring rollers in transversely adjustable slides in such a manner that the rollers can be readily separated and the machine drawn back without lifting it from the seam. In combination with the burring, folding and seaming rollers is a pair of

squeezing rollers arranged in such a manner that the working rollers can be released from the seam, while the squeezers hold the same firmly in its place; and combined with the squeezing rollers is a yielding-bearing and an eccentric cam, so that by the action of the cam the squeezing rollers can be readily separated and the seam released. The wheels which support the machine are arranged upon axles which are bent outside of the journals so as to be eccentric to the journals themselves, and by turning the axles of the wheels the machine can be adjusted higher or lower as may be desired.

Claim.—First, the arrangement of the transversely moving slides *f f'*, in combination with the burring rollers D D' E E' F F', constructed and operating substantially as and for the purpose herein shown and described.

Second, the employment of squeezing rollers I I', in combination with the burring rollers D D' E E' F F', folding roller G, and seaming roller H, all arranged and operating substantially as and for the purpose herein set forth.

Third, the arrangement of the eccentric lever *m*, and yielding-bearing *l*, in combination with the squeezing rollers I I', as and for the purpose set forth.

Fourth, the employment of axles C C', which are bent outside the journals, so as to be eccentric to the journals themselves, in combination with the wheels B B' and frame A, as and for the purpose specified.

No. 36,562.—GEORGE EARLE, of Dover, Ohio.—*Improved Process for Forming Leather Straps for Harness, &c.*—Patent dated September 30, 1862.—This invention consists in passing the strap, after it has been properly sewed, between two grooved cylindrical rollers, the grooves varying in size according to the size required for the strap.

Claim.—The herein described process of forming cylindrical straps for harness and other purposes.

No. 36,563.—J. P. FRAZER, of New York, N. Y.—*Improvement in Fastening for Chamber Doors.*—Patent dated September 30, 1862.—This device consists of a short slotted piece of metal A with a projection at each end, through one of which projections passes a screw. With the slotted piece is to be used a key having a recess at its centre to fit the housing or lock plate of a box lock. One end or hook of the fastener A is placed in the housing of either the spring or lock bolt, when the door is closed and the key inserted and tightened by the screw.

Claim.—The adaptation of the hook screw and key, for the uses and purposes herein set forth.

No. 36,564.—R. P. GILLET, of Viroqua, Wis.—*Improvement in Wagon Axles.*—Patent dated September 30, 1862.—That part of the axle on which the wheel revolves is covered with a coating of Babbitt's metal, extending up so as to form a shoulder, in which is a cavity for containing oil for lubricating the axle.

Claim.—Having the axle covered with Babbitt's metal, with an oil reservoir made in such metal, all as herein set forth and described.

No. 36,565.—L. W. HINES, G. SATERLEE and S. W. HARDEN, of Quasqueton, Iowa.—*Improvement in Grain Registers.*—Patent dated September 30, 1862.—This invention consists in the application of two stops, one on either end of a swinging spring lever or frame, one end of which latter is designed to receive the grain measure, while the other end is subjected to the action of a spring, and acts by means of a spring pawl on a ratchet wheel in such a manner that whenever the measure is filled and the swinging frame depressed, the action of the spring pawl causes the ratchet to be propelled one tooth; and when the measure is emptied, the inner end of the swinging frame descends by the action of the spring just far enough to cause the pawl to catch in a new tooth of the ratchet wheel, ready for a new move.

Combined with the swinging frame is a closed box provided with narrow slots, through which the side timbers of the frame extend, and arranged so as to protect the inner end of the swinging frame, together with the spring pawl and registering apparatus, against the injurious effects of dust.

Claim.—The arrangement of the stops *c d* in combination with the swinging frame A, spring C, or its equivalent, spring pawl D, and ratchet wheel E, all constructed and operating as and for the purpose herein shown and described.

Also, the arrangement of the closed box B in combination with the swinging frame A, spring C, and with the registering mechanism, as and for the purpose specified.

No. 36,566.—W. W. HUBBELL, of Philadelphia, Pa.—*Improvement in Concussion Fuzes for Shells.*—Patent dated September 30, 1862.—This invention consists in the combination of a metallic stem or fracturing tube, with a burning composition, so that the metal of the stem shall withstand the heat and ricochet, and shall part at a fracturing point, on concussion of the shell against an object after having been fired from a gun, so as to admit fire and explode the shell. In the front end of the metallic stem is a head or valve of circular or conical form, and covering the central hole so as to exclude the fire and fly out on concussion, and thus expose the central hole to the action of the fire generated by the surrounding burning composition.

The inside of the metallic stem is lined with plaster of Paris, to protect the central hole and the powder or priming it contains, from excessive heat until the stem fractures on concussion.

The water capping is secured to the proper case of the fuze, so as to enable the fuze composition to be inserted into the stock of the fuze, or into the shell casting most quickly in action.

The fracturing stem is constructed of sections of metal with a neck or flange to connect them, so as to withstand the concussion on ricochet, but fracture from concussion on penetration and explode the shell, and also be capable of graduation to explode the shell upon striking the ground on ricochet.

Claim.—First, the central metallic stem or fracturing tube, surrounded by the burning composition, so that it shall withstand the heat, and part at the fracturing point on concussion.

Second, the head *p* set in the top or front of the metallic stem or tube, so as to fly out of it and expose the central hole in the stem on concussion to explode the shell.

Third, the plaster of Paris lining inside of the metallic stem, for the purpose described.

Fourth, the combined horizontal and vertical vents in the capping, and these also in combination with the conical or accelerating chamber.

Fifth, securing the capping by screwing it or otherwise to the front end of the paper-case fuze, so as to set the fuze readily into any stock, already capped for service when in action.

Sixth, the paper facing surrounding the metallic fracturing stem to support it, and burn away and release it, substantially as described.

Seventh, the fracturing stem when constructed of sections of metal put together, and operating in the manner and for the purpose substantially as described.

Eighth, the conical or accelerating chamber L inside of the water capping, as described.

No. 36,567.—SAMUEL KEELER and JACOB BARTHEL, of Lancaster, Pa.—*Improvement in Seed Drills.*—Patent dated September 30, 1862.—At the rear of the frame is a swinging bar upon which is secured a cam or grooved scroll, consisting of a segment of a circle fixed diagonally upon the bar. In the grooved edge of the cam is fitted so as to move freely one end of a lever, the other end of which is connected with the shut-off slide beneath the hopper, so that as the swinging bar is turned the slide is correspondingly moved.

Claim.—The combination of the cam E attached to the swinging bar O, with the pivoted lever A operating the shut-off slide, the whole constructed, arranged, and operating in the manner and for the purpose set forth.

No. 36,568.—G. H. KIDNEY, of Cleveland, Ohio.—*Improved Washing Machine.*—Patent dated September 30, 1862.—This invention consists in the employment of a series of balls strung upon cords extending around the surface of the cylinder. Under the cylinder is also arranged a series of balls strung upon cords, attached at one end to a bar in the upper front part of the box, and at the other end extending over pulleys at the rear of the box. Weights are attached to the lower ends of the cords, so as to admit of the self-adjustment of the balls to the clothes between the two sets.

Claim.—First, the roughen-surfaced self-adjusting bed plate, when the same is constructed substantially as described, and for the purpose set forth.

Second, the combination of the roughen-surfaced self-adjusting bed plate, and the roughen-surfaced cylinder, when the several parts are constructed and arranged substantially as described and for the purpose set forth.

No. 36,569.—H. B. LANSING and H. W. GRENELL, of Hudson, Mich.—*Improvement in Corn-Planters.*—Patent dated September 30, 1862.—The rods upon which the markers are affixed are attached to the axle at one end; at the other end they are attached to a collar upon the axle provided with teeth on its outer side which engage with a rack on the hub of the wheel, so that the markers are caused to rotate with the wheel. By means of a forked lever fitting in a groove on the collar the latter may be disengaged from the hub of the wheel, when the latter will move without revolving the axle. By means of a jointed lever in connexion with a ratchet wheel and the toothed collar, the distance between the hills may be shortened as desired. At the rear of the tube which conveys the seed to the ground is a stamper, so arranged with a cam and cord as to rise and fall at the proper moment when the corn is dropped into the ground.

Claim.—First, the markers *c c c* at one end of the axle inserted into the collar C, and at the other end into the axle A, for the purpose herein set forth.

Second, the tube *d*, in combination with the stamper Q, operated in the manner and for the purpose herein described.

Third, the jointed lever K O, in connexion with the ratchet wheel J, and the toothed collar C, arranged in the manner and for the purpose herein set forth.

No. 36,570.—RUFUS M. MERRILL, of Chicago, Ill.—*Improvement in Lantern Lamps.*—Patent dated September 30, 1862.—This invention relates to an improvement in lantern lamps for burning coal-oils, and it consists in the arrangement of tubes or air passages extending from openings in the lamp bottom upwards on the outer side of the oil reservoir, and curving

machine in which a horizontal master wheel is made to act upon two pinions secured to a

with the same so as to insure a proper supply of air to the flame without extinguishing it when a sudden motion is given to the lantern. The upper and lower portions of the lantern are connected by means of spring catches secured to the frame at their lower ends, and extending upwards to near the top, where they are bent and pass through slots in the casing, and terminating with hooks or catches.

Claim.—First, the application of one or more air tubes or passages outside of the oil cup of a lantern lamp, substantially as and for the purpose herein set forth and described.

Second, the spring catches D D, when arranged substantially in the manner and for the purpose specified.

No. 36,571.—MYRON MOSES, of Malone, N. Y.—*Improvement in Breech-Loading Fire-arms.*—Patent dated September 30, 1862.—This invention consists in forming the front end of the cartridge case, and the portion of the barrel against which the case rests, of such a shape that the gas from the exploding powder will not pass between the barrel and the cylindrical portion of the cartridge case and foul it. Combined with a removable metallic cartridge case, into the rear end of which is inserted a cap tube or nipple, is a cup which covers the cap tube, and prevents the gas from the exploded cap from fouling the lock or other working parts, while the gas is permitted to escape through a channel made for the purpose.

Claim.—First, in combination with the removable charge-holding chamber or cylinder D, the neck *i*, and the shoulder near it on the outside and front end of said chamber or cylinder, and the recess in the bore for receiving both the neck and the shoulder, for the purpose specified.

Second, the movable cup G, with its opening 5, in combination with an opening *x*, for the passage of the nipple *r* as the barrel is vibrated, and for the escape of gas from the exploded cap, arranged and operating substantially as described.

No. 36,572.—NELSON PALMER, of Greenville, N. Y.—*Improvement in Hay Elevators.*—Patent dated September 30, 1862.—The hay fork, consisting of the curved tines, head piece, and handle, is attached at the head piece by means of a hinge to a bale, at the upper end of which is a pulley block; over this block passes a rope having one end secured to a jointed brace near the joint, which brace serves to keep the handle and bale in the proper position for the tines to penetrate the hay to be raised. By pulling the other end of this rope, when the hay is properly deposited, the brace turns upon its joint and admits of the tines being easily withdrawn.

Claim.—The combination of the bale *d*, jointed brace *e*, and cord *f*, with the hay fork *a b c*, as and for the purposes specified.

No. 36,573.—G. T. PEARSALL, of Apalachin, and S. A. GARRISON, of Union, N. Y.—*Improved Machine for Boring Hubs.*—Patent dated September 30, 1862.—Attached to the upper end of a permanent frame, by means of hinges, is a supplemental frame so arranged as to admit of its being turned over in a horizontal position, relatively to the main frame when desired. To the face side of this frame is secured the wheel, and the frame is provided with a gauge for the purpose of admitting the wheel to be accurately centred thereon, and used in connexion with a self-adjusting nut and adjustable bearing. In the centre of an annular plate of the supplemental frame is fitted a circular rotating head or disk composed of two annular plates having each an oblong rectangular opening through which passes a screw, and to the outer plate is secured a slide, provided with an oblique opening for the passage of the screw, which causes the latter to have an oblique position relatively with the hub of the wheel, and thus gives a taper form to the hole bored in the hub of the wheel.

Claim.—First, the securing of wheel C to a supplemental frame B, containing the working parts of the machine, which frame is attached to the fixed frame A, when the latter is in a horizontal position, as and for the purpose specified.

Second, the nut E, provided with an external spherical case *j** of soft metal cast around it, in connexion with the spherical socket *j*, formed in or between the plates *f k*, the case *j**, and nut E, being prevented from turning in the socket *j* by a projection K′, substantially as herein set forth.

Third, the disk or head H, formed of the two plates *o p* fitted in the plate *e* of the frame C′, in connexion with the slide I, screw D, and nut E, all arranged for joint operation, as and for the purpose herein set forth.

No. 36,574.—C. B. REICHMANN, of New York, N. Y.—*Improvement in Holders for Lamp Shades.*—Patent dated September 30, 1862.—This invention consists in connecting the springs which extend from the metal ring at the upper part of the shade to the holder, by means of lips and slots, so as to dispense with rivets and leave no opening through the spring and holder.

Claim.—The lips 4 4, and slots 3 3, formed as specified, and employed for connecting the spring *c* to the ring *b*, in the manner and for the purposes set forth.

No. 36,575.—J. S. ROWELL and M. F. LOUTH, of Beaver Dam, Wis.—*Improvement in Horse-Powers.*—Patent dated September 30, 1862.—This invention relates to a horse-power

machine in which a horizontal master wheel is made to act upon two pinions secured to a tumbling shaft which extends the whole length of the machine; and it consists in an arrangement of parts whereby the friction upon the bearings is reduced, and the wheel caused to continue to work well in gear after having become somewhat worn, the necessity for friction rollers being also dispensed with.

Claim.—The described arrangement of the master wheel B *b*, pinion shafts D D′, cog-wheel F, internal gear-wheel G, tumbling shaft H, and pinions I I′, the whole constructed and operating in the manner and for the purposes specified.

No. 36,576.—J. P. SCHENKL, of Boston, Mass.—*Improvement in Percussion Fuzes for Explosive Shell.*—Patent dated September 30, 1862.—The nature and object of this invention will be understood by the claim.

Claim.—The construction of the rear end of the plunger case A in such manner that the said rear end, while the fuze may be fixed in a shell, shall separate the plunger chamber *c* from the powder charge of the shell, and on explosion of the charge of the plunger, be broken away thereby, so as to allow the flame of such explosion to communicate with the explosive charge of the shell.

Also, the concussion fuze, as made with an explosive charge arranged within its plunger, and to be fired by explosion of the cap or percussion powder of the nipple, such being for the purpose of setting fire to the bursting charge of the shell, as described.

No. 36,577.—F. B. SCOTT, of Buffalo, N. Y.—*Improvement in Rotary Pumps.*—Patent dated September 30, 1862.—Within a cast-iron case is fitted a piston cylinder, to which are hinged the radial arms that carry the pistons. Connected with each piston is a friction roller that moves in a cam secured to the inside of the case, which cam serves to throw the pistons outwardly through slots in the cylinder at the proper moment to carry the water forward to the discharge pipe, and also to withdraw them at the proper moment to pass the abutment. The shaft by which the piston is revolved is made hollow with openings in its sides to receive water from a chamber above the cylinder case, and serves both as a shaft and discharge pipe.

Claim.—First, the arrangement of the piston cylinder F, pistons J, and cam D, with the case A, substantially as herein set forth.

Second, the hollow rotary shaft P in combination with the water chamber S, substantially as described.

No. 36,578.—JOHN SEBO, of Wilmington, Del.—*Improvement in Invalid Bedsteads.*—Patent dated September 30, 1862.—The rails of this bedstead are made round, and taper from the centre to the ends. The canvas is stretched upon a square frame E, which serves as a rest for the body, and is capable of adjustment to any degree of inclination by means of iron rods G, which extend downward on the outside of the head of the bedstead, and have cords H attached at their lower ends, the cords being suspended from a roller operated by a crank.

Claim.—The shape of the rails D and their arrangement and combination with the devices E G and J, arranged and combined as described for the purposes set forth.

No. 36,579.—B. C. SMITH, of Burlington, N. J.—*Improvement in Railways.*—Patent dated September 30, 1862.—This invention is designed as an improvement in railways, for which a patent was granted to the said Smith on July 9, 1861, and it consists in combining a series of longitudinal cast-iron girders, secured to each other and bedded into the ground, so as to be capable of being reversed or replaced by new rails instead of having the rail cast to and forming a part of the girder. The rails are connected to the girders by means of brackets and a wedge at points to secure them both laterally and vertically, and also by means of projections on the girder in connexion with the rail and detachable wedge-formed blocks, the rails may be secured laterally only when desired.

Claim.—First, combining a series of longitudinal cast-iron girders A, secured to each other and bedded into the ground, with a series of detachable rails B, substantially as set forth for the purpose specified.

Second, the brackets C and C′, the latter being either fixed or loose, and the wedge D, the whole being combined with and applied to the girder and rails, substantially as set forth.

Third, the projections E E′ on the girder A in combination with the rail B and detachable wedge-formed blocks F, the whole being arranged substantially as and for the purpose set forth.

Fourth, securing the adjacent beams to each other by means of the straps H applied to the projections G G, and secured thereto by means of lips *h* and key I, substantially as specified.

Fifth, connecting the tie rod K to the beams by confining the head in a recess formed between projections G G, as specified.

No. 36,580.—J. J. STORER and J. D. WHELPLEY, of Boston, Mass.—*Improvement in Grinding Mills.*—Patent dated September 30, 1862.—This machine is designed for reducing ores and other substances to a fine powder or dust, which is driven off as fast as produced through a central opening in the case of the triturator by means of a suitable fan or blower, and used in connexion with a chamber for collecting the dust as it is blown off. To the periphery of the disks which constitute the triturator are attached at convenient intervals ham-

mers or strikers consisting of metal bars bevelled off at the back so as to present a thin edge to the mass of ore through which the bars pass. The bolts which confine the two heads of

Claim.—As a new article of manufacture, the within-described heater for lamp chimneys, whether attached to the vessel or object to be heated, or distinct and separate therefrom as

mers or strikers consisting of metal bars bevelled off at the back so as to present a thin edge to the mass of ore through which the bars pass. The bolts which confine the two heads of the drum together are passed through immediately under the rim, thus forming chambers or recesses between each two bolts, so as to cause the material to be thrown violently against the bars, and, being checked in their motion, fall again before the hammers.

Claim.—First, a triturator, having a disk F and a central outlet K, in combination with a fan or blower I, for producing currents from the rim towards the central outlet to carry off the dust or fine powder as it is produced, substantially as specified.

Second, the strikers M, with a thin edge *n* in advance, substantially as set forth.

Third, the chambers or recesses *u* on the inner face of the rim *f*, for the purpose specified.

Fourth, in combination with a mill or triturator for producing fine dust or powder, and a fan or blower for carrying along the dust or powder, a collecting chamber or box P covered or partially covered with a suitable cloth which will permit the escape of the air while it retains the dust or powder, substantially as set forth.

No. 36,581.—M. D. WHIPPLE, of Cambridge, Mass.—*Improvement in Water Gauges for Steam Boilers.*—Patent dated September 30, 1862.—The nature and object of this invention will be mainly understood from the claim. An explosive safety-valve, held down by a spring, is placed over an opening made through the side of a cylinder and its lining into the fireplace, for the purpose of guarding against an explosion of gas in the cylinder when the fire is first kindled and before the engine is started.

Claim.—Using the lower part of the working cylinder itself as a stove or fire-pot, in combination with an air pump and passage for conveying and forcing the air from below up through the fire directly against the piston, substantially as described and for the purpose set forth.

Also, in combination with a divided cylinder, a long hollow piston fitting loosely in that part of the cylinder which is exposed to the direct action of the fire, and packed at its other end, which is so far removed from the direct action of the fire that the packing will not be destroyed by it, substantially as set forth and described.

Also, facing the end of the piston which is in immediate contact with the fire by a disk of soapstone, or its equivalent, substantially as described.

Also, in combination with a hopper and the fire-pot of a hot-air engine, an automatic feed worked from the engine and supplying the fire intermittently with fuel, substantially in the manner set forth.

Also, in combination with the fire or gas chamber of a hot-air engine, an explosive valve G, for the purpose described.

No. 36,582.—JAMES K. WHITESIDE, of Rising Sun, Md.—*Improved Washing Machine.*—Patent dated September 30, 1862.—Upon the under sides of the lids which open from the centre are secured a series of triangular-shaped ribs with rounded edges on the perpendicular side and corrugated on their under sides. On the inner ends of the box are angular vertical ribs, and on the bottom of the box is a reciprocating block formed of a series of ribs corrugated or waved on their upper edges. The machine is operated by moving it to and fro on rockers attached to its legs.

Claim.—In combination with the wash box and washing block or frame the ribs E *d c*, arranged to operate in connexion with each other in the manner substantially and for the purpose set forth.

No. 36,583.—W. F. COCHRANE, of Springfield, Ohio, assignor to Himself and WARDER & CHILD, of the same place.—*Improvement in Hopper Boys for Flour Mills.*—Patent dated September 30, 1862.—In this machine the hopper boy consists of a vertical shaft turning freely in its bearings and carrying a leader and rake-arm upon its upper and lower ends respectively. The ends of the leader and rake-arm are connected by cords in order to impart to the rake the movement of the shaft and leader. In case the discharge be stopped and the feeding continue, the hopper boy still spreads and stirs the meal, the rake gradually rising as the quantity increases, and always remaining above the meal. When the discharge and the quantity of meal decreases, the rake-arm descends, carrying the spout-arm and spout with it. The spout-arm is furnished with a collar that plays freely on the main shaft and is connected with the collar of the rake-arm, so that both will rise and fall together.

Claim.—First, giving to the spout or trough which feeds the meal from the cooling floor to the bolting reel a free vertical movement, so that its mouth may always maintain the same relative position to the surface of the meal on the cooling floor.

Second, the combination of the rake-arm B' with the spout-arm B 2 and sliding spouts B 3, substantially in the manner described.

Third, making the arm which carries the sliding spout thin in its horizontal cross-section, and sharp or wedge-shaped on its under side, for the purpose herein described.

No. 36,584.—J. B. GREENE, of Providence, R. I., assignor to E. P. GLEASON, of the same place.—*For Heater for Lamp Chimneys.*—Patent dated September 30, 1862.—This invention consists in the employment of a wide metal ring having a flaring upper edge and supported upon the top of the chimney of a coal-oil lamp by means of springs attached to the ring. The upper ends of the springs are formed with hooks to catch upon the top of the chimney.

Claim.—As a new article of manufacture, the within-described heater for lamp chimneys, whether attached to the vessel or object to be heated, or distinct and separate therefrom as set forth.

No. 36,585.—ISAAC HICKS, of Hartford, Wis., assignor to Himself and L. E. PECK, of the same place.—*Improvement in Stump Extractors.*—Patent dated September 30, 1862.—This invention consists in the employment of two levers or a compound lever in connexion with lifting bar and a fulcrum supporting bar, the two latter being provided with holes into which fit pins placed over the levers, so that the full power of the levers may be successively exerted upon the said bars, as they are elevated at each change of the pin in the holes.

To the lifting part of the frame is attached a pair of wheels so connected with the axle that the frame is allowed to rest upon the ground without subjecting the wheels to any strain or sustaining any weight when the machine is at work.

Claim.—The combination of the bar B, levers C F, one or both, lifting bar D, and fulcrum supporting bar E, all arranged to operate as and for the purpose herein set forth.

Further, the applying of the wheels G G to the frame A of the machine, through the medium of the levers K K and hooks L L arranged with the axle H and sill pieces *a a* of the frame, as and for the purpose herein specified.

No. 36,586.—JACOB JENKINS, of Lynn, Mass., assignor to G. W. KEENE, M. W. SHEPARD, and J. C. STIMPSON, of Salem, Mass.—*Improvement in Machines for Preparing Heels for Boots and Shoes.*—Patent dated September 30, 1862.—Reference to the specification and drawings will be necessary for an understanding of this invention.

Claim.—First, the cams V' and 16 in combination with the slides I J K and L and the tool stock 24, constructed and operated as and for the purposes described.

Second, the combination of the adjustable crank C, the arm D, and the chains E E', with the rotating pattern block G, constructed and operated substantially as described.

Third, the tool-stock 24, constructed as described, in combination with the arms N and M, substantially as above set forth.

No. 36,587.—C. H. PAINE, of Providence, R. I., assignor to Himself and HOWARD TILDEN, of Philadelphia, Pa.—*Improvement in Carriage Jacks.*—Patent dated September 30, 1862.—The frame of the jack consists of two bars crossing each other, one of which is longer than the other, and at the upper end of the longer bar is pivoted a lever. This lever is connected near its lower end with a short link which is pivoted to a second lever having its fulcrum in the upper part of the short cross-bar of the frame, the said link in connexion with the short arm of the lower lever serving as a toggle joint.

Claim.—The new or improved arrangement, substantially as described, of the bar A B and the levers C D.

Also, the combination and arrangement of the toggle or link F with the levers C D and their supporting frame, the whole being made to operate as explained.

No. 36,588.—ELI PERRY, of Baldwinsville, N. Y., assignor to Himself and JOHN BOLEY, of the same place.—*Improvement in Rotary Pumps.*—Patent dated September 30, 1862.—This invention consists in the combination with an eccentrically formed case provided with an increasing spiral discharge passage, of a piston having radially curved and transversely concave wings, and an induction feeder extending through the top of the case, so that in addition to a centrifugal action imparted to the water, the rapid motion of the feeder serves to force the water downward, thus keeping a continual and unvaried pressure within the case and assisting in raising the liquid.

Claim.—The combination with the spiral discharge passage D of the piston provided with curved concave wings E E and the feeder G, the whole arranged and operating substantially as and for the purpose herein set forth.

No. 36,589.—PHILANDER PERRY, of Waterford, N. Y., assignor to Himself and E. H. BENDER, of Albany, N. Y.—*Improvement in Wipers for Blackboards.*—Patent dated September 30, 1862.—This device is formed of a block of wood over which is secured a piece of flannel or other similar material, under which is a stuffing composed of prepared shavings and clippings of cloth, with or without small pieces of sponge.

Claim.—The combination of the wooden blocks A and D with a covering of cloth, the space between them being filled with a stuffing composed of prepared shavings, and clippings of cloth, with or without pieces of sponge, substantially as described and for the purposes set forth in the within specification.

No. 36,590.—R. N. EAGLE, of New York, N. Y.—*Improvement in Snuffers for Lamps.*—Patent dated September 30, 1862.—This invention is explained by the claim and engraving.

Claim.—First, the making of the blades of snuffers or snuffing shears for lamps, constructed with chimneys or without, and burning flat or round wick, either concave or convex, to meet the convexity or concavity of the burner or tube holding the wick.

Second, so constructing lamp snuffers for trimming the round wick that the indentation in

Second, so constructing lamp snuffers for trimming the round wick that the indentation in one or both blades, when the latter are opened, admits the wick, and in closing encircles and compresses it and accomplishes the work in a single and even cut in the manner described.

Third, making snuffers or snuffing shears for lamps with one part of the blades straight and another part concave or convex, for the purposes set forth.

Fourth, a partial gallery or a circular raised rim for catching the crust or burnt part of the wick when removed.

No. 36,591.—JOHN N. WILKINS, of Chicago, Ill.—*Improvement in Sewing Machines.*—Patent dated September 30, 1862.—This invention relates to that class of sewing machines in which a rotating hook is employed in combination with an eye-pointed needle and spool, the said hook entering between the needle and its thread to form the needle-thread loop and carry it around a spool which carries the other thread; and the invention consists in dispensing with the brush or other device in common use for checking the loop, and using a finger projecting from the inner periphery of the ring which holds the spool in the cavity of a recessed disk which receives the spool. The finger is curved on its inner face, and is placed in front of the front face of the spool, and its upper end extends to or slightly beyond the edge of the spool, and just within the periphery of the recess in the face of the disk, by which means the looper is drawn off the hook before its point enters the next loop, thus causing the old loop to be cast off before the hook enters the new loop.

Claim.—In combination with the rotating hook, eye-pointed needle and spool, the thread controller having the mode of operation, substantially such as herein described, to receive the loop and hold it from the face of the spool so that that portion of the loop which extends back of the hook shall be drawn over the edge to the front thereof before the point of the hook reaches the needle to enter the next loop, the said controller being so inclined as to permit the loop freely to escape from it as is drawn up in forming the next loop, as set forth.

Also, extending the said loop controller to or near the edge of the spool, substantially as described, to prevent the loop from getting into the spool, as set forth.

No. 36,592.—JOHN B. ATWATER, of Ripon, Wisconsin.—*Improvement in the Rifling of Guns.*—Patent dated September 30, 1862.—This invention consists in enlarging the bore of the gun or its sectional lines for the distance of about eleven diameters of the calibre from the breach, and extending the enlargement to the muzzle, the object being to prevent the packing of the air between the muzzle and the point at which the lands are cut away, and to reduce the friction of the ball in its passage through the barrel without impairing its spiral motion.

Claim.—The cutting out of each land, in the manner and for the purpose herein specified.

No. 36,593.—T. R. TIMBY, of Worcester, Mass.—*Improvement in Revolving Battery Tower.*—Patent dated September 30, 1862.—Antedated July 8, 1862.—This invention consists of a tower constructed entirely of iron or steel plates, and made to revolve continuously or intermittently in either direction around its vertical axis at the option of the commander, so that all its guns may be brought successively to bear upon the same point of defence or attack.

Claim.—A revolving tower for defensive and offensive warfare, whether placed on land or water.

No. 36,594.—D. W. WHITNEY, of New York, N. Y.—*Improvement in Apparatus for Piercing Cloth for Button Holes.*—Patent dated September 30, 1862.—Antedated August 23, 1862.—This device consists of a platform, to which are attached a series of vertical cutters secured to upright bars, which serve as guides to adjust the cloth to the cutters. Connected to the platform by hinges is a frame which, when folded down, is made to fit within the cutters, by which means a series of button holes for tents or garments may be expeditiously and regularly cut and the places for the button marked.

Claim.—The combination and arrangement of a series of perforators with a frame and platform, arranged substantially as and for the purpose herein set forth.

No. 36,595.—G. W. ANSLEY, of Cleveland, Ohio.—*Improvement in Skates.*—Patent dated October 7, 1862.—The object of this invention is to so mount the skate upon springs, that an easy motion is given between the sole and the runner, capable of adjustment for a lighter or heavier person. The hollow case firmly secured to the pivoted shank has a vertical movement in the hollow cavity, and within it is placed either a gum-elastic or helical steel spring, which extends from the base of the case to a steel plate upon the sole and placed over the cavity. At the lower part of the shank is a transverse pin, over which passes a loop whose ends are secured in the nut, in which works the screw, by which the springs are rendered capable of adjustment. Sufficient room for the movement of the springs is allowed between the pin G and the runner, or else the ends of the loop may be allowed to move up and down in the nut.

Claim.—The herein-described special arrangement of the cavity A′, case B, and springs K K′, when these parts are combined with the pivoted shank C, loop F, and adjusting screw I, as and for the purpose specified.

No. 36,596.—W. B. BARNARD, of Waterbury, Conn.—*Improvement in Window Blind Fastenings.*—Patent dated October 7, 1862.—This invention consists in the use of a rod, which passes through a tube forming part of the projection on the sill, to which the catch attaches itself, and which is surrounded with a spiral spring, and so arranged that when the blind is closed the rod will press against it and thus prevent all rattling under the action of the wind. The precise arrangement of the rod is not claimed; it may be so modified as to be attached to the blind and press against the sill.

Claim.—The employment or use, in connexion with a shutter or blind fastening, of a pressure rod applied either to the window sill or to the shutter or blind, to operate as and for the purpose herein set forth.

No. 36,597.—W. B. BARNARD, of Waterbury, Conn.—*Improvement in Blind and Shutter Fastenings.*—Patent dated October 7, 1862.—This invention consists in having the stud or pin and projection which are attached, respectively, to the window-sill and to the side of the building, and on which the catch of the blind or shutter fits, of taper or wedge-shape form in their horizontal section, and having the recess in the catch of corresponding form, so that when the latter catches on the former it will fit snugly thereto, and thus prevent all movement of the shutter under the action of the wind.

Claim.—The wedge-shaped stud or pin E in the sill D of the window frame, and the wedge-shaped lip *e* on the projection F attached to the building, in combination with the spring catch B, provided with the taper recesses *d*, substantially as and for the purposes herein set forth.

No. 36,598.—CHARLES BASSETT, of Massilon, Ohio.—*Improvement in Hoisting Cranes.*—Patent dated October 7, 1862.—At the lower part of the mast is placed an annular disk having in it an annular groove, in which are placed a number of balls, on the upper surfaces of which rests another disk, to which the arm H pivoted to the upper part of the mast is connected by a brace. By this arrangement any weight attached to the outer end of the arm is made to rest on the balls, thus allowing the arm to be swung in either direction with great ease.

Claim.—The disk D and friction balls E, in combination with the revolving arm H, when the several parts are constructed and arranged substantially as and for the purpose herein specified.

No. 36,599.—H. BIEBUYCK, of Brussels, Belgium.—*Improved Blasting Powder.*—Patent dated October 7, 1862.—The object of this invention is to obtain a slow-burning powder for blasting purposes. It is claimed that nitrate of baryta, in combination with charcoal and a small proportion of saltpetre, accomplishes the desired result.

Claim.—The use in the manufacture of blasting powder of nitrate of baryta, whether combined with nitrate of potash or not, substantially as herein set forth.

No. 36,600.—CHARLES BŒCKH, of Strausburg, France.—*Improved Cleaner for Lamp Chimneys.*—Patent dated October 7, 1862.—The drawing and claim will explain the nature of this invention.

Claim.—A brush or rubber for cleaning lamp chimneys, the shaft of which being adapted only to one side of the inner portion of the chimney and being covered with some rubbing or brushing material, the brush not being round shape like the common chimney-cleaners in use at the present time.

No. 36,601.—S. S. CAMPBELL and JOSIAH GOODWIN, of Philadelphia, Pa.—*Improved Machine for Making Confectionery.*—Patent dated October 7, 1862.—The claim and engraving explain the nature of this invention.

Claim.—The method herein described for filling the boards with starch, or any substance that the impressions can be made in, from a stationary box or hopper, while the boards are passing under, and for smoothing or levelling the starch, or any substance that the boards may be filled with, by means of a stationary strike or smoother, while the boards are in motion, and for moulding or making the impressions in starch, sugar, flour or any composition that can be used in the moulding or making the impressions by means of a lever and springs, and for the running, dropping or filling the impressions with any mixture or composition making, or called confectionery or candy, that requires to be run or dropped in the way described, by means of two plates, one working on or over the other, each plate being perforated with holes, the top plate working by means of a piston or rod, opening and closing the apertures and filling all the impressions at one and the same time.

No. 36,602.—JOHN CARTON, of Utica, N. Y.—*Improvement in Railroad Lamps.*—Patent dated October 7, 1862.—This invention is designed as an improvement upon a lamp for which a patent was granted to the said Carton on May 1, 1860, and it consists in providing a chamber which is formed by enlarging the upper end of the outer tube or the cap and then causing it to curve inwards, so that the aperture of the tube or cap shall be about the size of the circumference of the wick. At a suitable distance above the wick is placed a button.

Claim.—The outer tube E, the cup thereof forming the chamber H and the bottom B, all constructed and operating substantially as described in combination

No. 36,603.—WILLIAM CLISSOLD, of Dudbridge Works, Stroud, England.—*Improvement*

the heel and sole. The jaws of this clamp are provided with tangs, which pass through the

No. 36,603.—WILLIAM CLISSOLD. of Dudbridge Works, Stroud, England.—*Improvement in Machinery for Oiling Wool.*—Patent dated October 7, 1862.—Patented in England February 24, 1862.—In this invention a travelling brush or travelling brushes, after receiving oil from a dipping plate, are made to transfer the same to a roller which is mounted above the feed apron of the carding engine and presses upon the wool supplied thereto. The contact of this oil roller with the wool passing under it insures an equal distribution of the oil over the whole surface of the wool.

Claim.—The oiling of wool preparatory to carding the same, by means of a pressure roller supplied with the oil or oleaginous mixture by a travelling brush which receives the same from a dipping plate or its equivalent, as above desribed.

No. 36,604.—RUSSELL COBB, of Hadley, Mich.—*Improved Hay and Grain Rack.*—Patent dated October 7, 1862.—Across the top of the box which, when the grain is carried, serves to catch all loose grain, are placed four transverse bars, and on these bars the platform of the rack frame is placed. This platform consists of two parallel boards as long as the box, but when placed in position, considerably wider, which are attached to the two central tranverse bars which fit on staples on each side of the box and are secured by keys. To each end of the transverse bar of the platform there is hinged a bar, to which the six end uprights are attached, which are connected by cross-bars. These end frames when not in use can be folded down on the platform, but when in use are supported by braces attached to the sides of the frame by pivots. The advantages of the frame are the simplicity of construction, its easy adjustment to, and removal from the vehicle.

Claim.—The box A in combination with the platform B, and folding frames C C, all constructed and arranged substantially as shown, to form a new and improved hay and grain rack for vehicles as set forth.

No. 36,605.—C. E. EASTON, of Cedarville, N. Y.—*Improvement in Fences.*—Patent dated October 7, 1862.—Each section of the fence has its posts, which rest upon the ground inclined in an opposite direction, the posts being connected at their upper ends by a pin. In order to keep the fence in place and prevent it being overturned by the wind, two inclined stakes are driven into the ground on each side of the panels, which are much taller than the fence posts, and are connected by riders placed in the crotches formed by their intersections.

Claim.—The combination of the stakes and the riders, with the panels inclined laterally in opposite directions, as described, when the parts are constructed and arranged in reference to each other, substantially as set forth—that is to say, the stakes being independent of, or not attached to the panels forming the lower part of the fence, and the stakes and riders being so arranged that the latter shall meet over the middle of each panel instead of at the ends, the riders not being attached to the stakes, but pressing by their weight into the angle between them, to bind the stakes, and thereby the fence, in position.

No. 36,606.—JOHN DU BOIS, of Williamsport, Pa.—*Improved Mode of Constructing, Setting, and Removing Bridges.*—Patent dated October 7, 1862.—This invention is designed as an improvement in the construction of bridges, by which means the span of the bridge may be constructed entire at a distance from the bridge piers, and afterwards brought to the piers and set in position. By the same means the whole span or section of a span can be removed entire and afterwards replaced. A substantial workshop is first erected in the stream on piles, between which a floating foundation capable of being raised or sunk is placed; on this foundation the side frames of the span are constructed, and then raised to an erect position by sinking the foundation, a chain suspended from the workshop being attached to the top stringer of the frame. In this way the span is constructed; the floating foundation is then towed between the bridge piers and the frame lowered into position.

Claim.—First, a floating foundation, adapted in form, and construction, and operation, substantially as described, to the purposes herein set forth.

Second, the combination of the piles *a a*, and their attachments *e*, with the floating foundation, so that the side frames of the bridge may be adjusted to a vertical position, substantially as set forth.

Third, the method substantially as herein described of constructing, setting, removing, and replacing a span of a bridge.

No. 36,607.—G. W. ELLIS and C. W. GLIDDEN, of Stoneham, Mass.—*Improved Machine for Attaching Heels to Boots and Shoes and Polishing the Same.*—Patent dated October 7, 1862.—The boot or shoe is placed upon the last or bed, which is encircled by the strap I, so that the upper is prevented from interfering with the action of the rods, and the heel, formed in the usual manner, is placed in proper position on the sole. In the series of holes in the plate I are placed nails, their heads resting upon the end of the rods. The holes in the plate T are also filled with nails, their heads upwards and under the ends *v* of the plate S. By the action of the lever D the shaft *c* is forced down, while, at the same time, by the cam H the tube G is forced up, and in this way the nails are driven into the heels, securely fastening the layers together. By turning the slotted lever Q the hinged knife is made to trim off the heel in proper form, the slot in plate P serving as a guide, the shoe being held in proper position by the clamps, the jaws of which firmly grasp the upper of the shoe at the junction of

the heel and sole. The jaws of this clamp are provided with tangs, which pass through the plate N, a projection on the under side of which fits into a slot on the slide L, so that the clamp is forced forward as the jaws are operated by the action of the plate. After the knife has finished its work it is removed and the burnishing frame substituted, which is operated in the same manner. The cutter, which is hinged to the plate *n*, is for the purpose of cutting the inner edge of the heel, and is forced down by the shaft *c* after the heel is burnished, the gauge preventing it from penetrating the sole of the shoe.

Claim.—First, the perforated plate T, having a shank or neck *w* fitted to work up and down in the tube O, which terminates at its lower end in a plate S provided with rods *v*, the perforated plate being forced downward to hold the heel of the shoe or boot firmly upon its last by a helical spring within the tube, in combination with the last or bed I, sliding tube G, rods *k*, and cam H, when arranged for joint operation in the manner and for the purpose described.

Second, the slotted lever Q, fitted upon the tube O, and having a hinged knife R attached to its outer end by a shank or neck *s* fitted to work in a curved slot *q* in the plate P, when the whole is combined and arranged to operate in the manner described.

Third, the burnishing frame V, in connexion with the plate P, arranged substantially as set forth.

Fourth, the strap or guard I′, attached to the last I, at its back part, when used in combination with the rods *k′* for the purpose specified.

Fifth, the clamp M, attached to the slide L, in connexion with the plate N, or its equivalent, when arranged to operate in connexion with the knife R, substantially as and for the purpose specified.

Sixth, the cutter *d′*, provided with a gauge *e′*, attached to the adjustable arm U, which is connected to the plate *s*, as and for the purpose herein set forth.

No. 36,608.—J. P. GAGE and J. C. GILBERT, of New York, N. Y.—*Improvement in Utilizing the Products of the Asparagus Plant.*—Patent dated October 7, 1862.—This invention consists in drying and roasting the seeds of the asparagus plant, and using them as a substitute for coffee.

Claim.—The within described preparation, new commodity, or article of manufacture, substantially in the manner and for the purpose set forth.

No. 36,609.—R. R. GASKILL, of Wyanet, Ill.—*Improvement in Cultivators.*—Patent dated October 7, 1862.—The object of this invention is to obtain a cultivator having its ploughs arranged in such a manner that they may readily be adjusted to plough to a greater or less depth, and at a greater or less distance apart as may be required, and at the same time be capable of being manipulated by the operator either while riding on the machine or walking behind it. Another object of this invention is the breaking or stopping of the wheels of the machine at either side by simple mechanism easily manipulated by the driver, so as to assist the draught pole to turn the machine.

Claim.—First, the plough bars F F, secured to the front cross-bar *h* of the frame A by means of the double hinges or universal joints *a* a**, in combination with the rods G G, fitted in the bearings H connected to the bars F F, and arranged with the adjustable bearings J′, as shown to operate as and for the purpose specified.

Second, the adjustable or movable seat C, when arranged as shown, and used in combination with the bars F F, rods G G, and levers J or K, as and for the purpose set forth.

Third, the swinging or adjustable draught hole D, arranged as shown with the holding lever E, in combination with the brakes formed of the levers O, rods Q, and cranks R; with the shoes S attached, all arranged to operate as and for the purpose set forth.

No. 36,610.—HENRY GLOVER, of Oxford, Mass.—*Improvement in Wind Wheels.*—Patent dated October 7, 1862.—This invention is intended as an improvement in that class of wind mills for which letters patent were granted to Henry Glover July 10, 1860, and it consists in the arrangement of a spider, connected by suitable rods with the lowest slats or shutters of each sail, in combination with spring slat bars attached to the rear side of the several shutters in such a manner that by the action of the spider and slat bars the several shutters are combined, so that by opening one the rest are also opened, and at the same time the shutters are so attached to the shutter bars that they are thrown open by the centrifugal force of the bars when the velocity of the sails exceeds a certain point, the centrifugal force increasing as the bars move out from the centre, and thereby counteracting the increasing force of the springs. The invention also consists in combining with the shutters of each sail an adjustable vane, in such a manner that, if a sudden gust of wind strikes the wheel, or if the force of the wind exceeds a certain limit, the shutters are thrown open and damage to the wheel prevented; it consists, finally, of the arrangement of a serrated disk attached to the solid shaft which carries the spider, in combination with one or more teeth projecting from the side of the bevel wheel on the hollow shaft which carries the wheel, and with spring pads and suitable levers, in such a manner that by the action of these several parts the slats can be opened at any moment, and the wheel thereby stopped when desired.

Claim.—First, the arrangement of the spider L, rods *k*, and shutters K, in combination with the spring slat bars *h′*, connecting the several shutters of each sail, and secured to the rear side of said shutters, substantially as and for the purpose described.

Second, the arrangement of the adjustable vanes M′, in combination with the shutters K, of the wind sails J J, constructed and operating in the manner substantially as set forth.

Second, the arrangement of the adjustable vanes M′, in combination with the shutters K, of the wind sails J J, constructed and operating in the manner and for the purpose specified.

Third, the arrangement of the serrated disk N, sliding shaft M, projections *u*, and spring pads *t*, in combination with the spider L and shutters K, of the wind sails J J, constructed and operating substantially as and for the purpose set forth.

No. 36,611.—ALEXANDER GORDON, of Rochester, N. Y., assignor to JAMES BRAYLEY and JOHN B. PITTS, of Buffalo, N. Y.—*Improvement in Grain Separators.*—Patent dated October 7, 1862.—The claim and engraving will explain the nature of this invention.

Claim.—In combination with a straw belt or raddle, having a shake motion communicated to it, a rack or series of slats, placed within the straw belt, for the purpose of preventing the straw from working through and getting back into the machine, but without preventing the grains from going through, substantially as described and represented.

No. 36,612.—J. F. GRIFFEN, of New York, N. Y.—*Improvement in Fruit Jars.*—Patent dated October 7, 1862.—Two or more lugs project from the sides of the neck of the jar, under which is placed a ring having inclined planes and provided with elastic arms which project over the cover. By turning the ring the cover is brought down closely upon and secured firmly to the neck, the elasticity of the arms giving a yielding pressure, and allowing a tight joint to be obtained without danger of breaking the cover or lugs.

Claim.—A jar top, that is composed of one or more arms *c*, extending to or beyond the centre of the cover C and of a ring D, with inclined planes *b*, the whole combined as shown and described.

No. 36,613.—JAMES HAGEMAN, of Williamsburg, Ohio.—*Improvement in Buckets and Measures.*—Patent dated October 7, 1862.—This invention consists of the peculiar construction of the wooden bottom of buckets or measures, otherwise constructed of metal.

Claim.—The wooden bottom when bound around the edge with metal, and attached to the body of the bucket or measure, in the manner and for the purpose set forth.

No. 36,614.—R. W. HALE, of Boston, Mass.—*Improvement in Feed-Water Heating Apparatus.*—Patent dated October 7, 1862.—This invention consists in passing a portion of the exhaust steam through a metallic pipe which is surrounded by a second pipe of non-conducting material of a size slightly larger than the steam pipe, the feed-water being caused to pass in another sheet through the space between the two pipes on its way to the boiler, whereby to supply the boiler with hot water immediately after the engine is started, and to do this with but little loss by evaporation or otherwise, and by the consumption of but a small portion of the exhaust steam.

Claim.—The method herein described of heating the feed-water of steam engines by means of an exhaust steam pipe and a surrounding water pipe, combined and operating in the manner set forth for the purpose specified.

No. 36,615.—J. HODSKINSON and O. C. SMITH, of Salem, Mass.—*Improved Washing and Wringing Machine.*—Patent dated October 7, 1862.—This invention consists in the employment or use of an endless apron, pressure rollers, and a reciprocating rubber, arranged in such a manner that the clothes may be subjected to a requisite degree of rubbing in order to cleanse them thoroughly from dirt, and then be subjected to a sufficient pressure between rollers, so as to have the moisture expelled from them, the washing and wringing operations being performed consecutively and by a continuous operation of the machine.

Claim.—The reciprocating rubber E, in combination with the endless apron H and rollers I J L and O, arranged in connexion with the frame A and F, to operate as and for the purpose herein set forth.

No. 36,616.—D. W. G. HUMPHREY, of Chelsea, Mass.—*Improved Button-Hole Stitch.*—Patent dated October 7, 1862.—Reference to the description and drawing will be necessary for an understanding of this invention.

Claim.—The button-hole or edge-finished stitch, made from two threads and interlooped, substantially as described.

No. 36,617.—D. W. G. HUMPHREY, of Chelsea, Mass.—*Improvement in Sewing Machines.*—Patent dated October 7, 1862.—This invention will not admit of a brief description; its general features will be understood from the claim.

Claim.—First, the needle-bar carrier C operated as described, whereby a regular lateral motion is imparted to needle *a*, carrying it alternately through and over the edge of the material worked upon, to form an edge finish or button-hole stitch.

Second, the combination of the needle-bar carrier C, the loop carrier *d*, needle *b*, hook *c*, and loop check *i*, with needle *a*, arranged and operated as described, whereby the button-hole stitch represented is produced.

Third, the cam wheel Wc employed to feed the material to be stitched, when such material is held and directed by or acted upon through plates, clamps, or their equivalents, the said cam wheel being moved by any suitable mechanism.

Fourth, the slotted plate V, for the purpose of giving direction to the feed clamp in stitching any form of button hole, in combination with the cam wheel Wc, for the purpose of moving the said feed clamp, both arranged and operating substantially as specified.

Fifth, the feed clamp K2, constructed substantially as described, for the purpose of holding the material to be worked upon while it is being fed and directed by the cam wheel Wc, in combination with the slotted plate V, or by any other suitable mechanism.

Sixth, the employment of the rocker X, piston *e*2, adjustable plate Y3, and spring *r*2, in combination with the lever T, operated as and for the purpose specified.

No. 36,618.—CLARENCE LINDEN, of Eden Township, Ill.—*Improved Atmospheric Air Bed and Knapsack.*—Patent dated October 7, 1862.—This air bed is provided with an outside cover of enamelled cloth or leather cut longer or wider than the bed, so that the ends and sides fold over it. When the bed is uninflated it can be folded in such a manner as to form a knapsack, and is provided with straps to enable it to be worn as such.

Claim.—As a new article of manufacture, the elastic air bed, constructed so as to be carried and used as a knapsack when constructed, and its parts, relatively to each other, all arranged as and for the purpose specified.

No. 36,619.—JOSEPH MARKS and RICHARD EATON, of Hamilton, Canada.—*Improved Spark Arrester.*—Patent dated October 7, 1862.—This invention consists in the use of two or more conical diaphragms of gauze-wire netting or perforated plates held at a convenient distance from each other in the stack. Also, in the use of a central cone, by means of which the sparks which escape through the lower nettings are allowed to return into the chimney, and by the action of the exhaust steam are further reduced in size and extinguished before being finally ejected into the atmosphere.

Claim.—First, the perforated or gauze cones B B and C C, in combination with the outer shell of the smoke stack, when the former is arranged within the latter as described.

Second, the double cone pieces D arranged in the lower open end of the perforated or gauze cone B B, so as to deflect a portion of the sparks which escape through the perforations or meshes of the cone B B through an annular space at the bottom thereof into and against the inner sides of the chimney or smoke stack, substantially as described.

No. 36,620.—J. G. PERRY, of South Kingston, R. I.—*Improvement in Pocket Knives.*—Patent dated October 7, 1862.—The handle of this knife is without a back spring, and the two parts of the back are attached together at one end by a rivet passing through them and the shank of the blade. The sides of the handle are kept apart by a block attached to the inside of one part at its lower end. A staple also projects from the same side above the block into a recess in the opposite half handle, and through this passes a bolt placed between the metal lining and outside covering and attached to the escutcheon. In this way the handles are secured together, but can readily be disconnected by moving the escutcheon towards the blade.

Claim.—The combination of the bolt with the escutcheon or name piece, substantially as described and for the purpose set forth.

No. 36,621.—T. R. PICKERING, of New York, N. Y.—*Improved Centrifugal Governors.*—Patent dated October 7, 1862.—The object of this invention is to obtain the requisite centrifugal force and stiffness without making the spring too heavy, and consists in the peculiar construction of the spring, and also the shape of the curve given it by the manner in which the ends are attached. Upon the spindle of the governor, and also on the sleeve, is a broad deep flange having a cylindrical periphery, and having on its outer surface grooves parallel with its axis, in which the ends of the springs, which consist of straight narrow plates of steel, are attached and secured by the circular collar, a longitudinal movement being prevented by riveting the ends to the flange and collar. Upon the centre of the spring is placed the ball, which is secured there by passing the spring through straight plugs, which are screwed into a hole passing through the vertical axis of the ball. The ends of the springs and the middle portion are thus made straight, the curve being a double cyma, which form offers great resistance to the centrifugal force of the balls in comparison with the thickness of the steel springs. The leaves which are attached to the springs at their sides and centres give it strength to prevent fracture at those points.

Claim.—The employment of the collar E with the spring ends and the flanch B, as and for the purpose herein shown and described.

Second, the combination of the leaves *g h* with the spring D, as and for the purpose herein shown and described.

Third, the employment of the central plugs *e e*, in combination with the balls F and springs D, in the manner and for the purpose herein shown and described.

No. 36,622.—ELIAS RHOADES, Sr., of Clyde, Ohio.—*Improvement in Pumps.*—Patent dated October 7, 1862.—The barrel or cylinder of the pump is provided at each end with a narrow rim projecting inwards to form seats for the valves. Perforated heads are attached to each end of the cylinder in such a way as to leave a space between them and the rim or ledge, the perforations being placed near the outer margin of the heads. Between the heads

and ledges of the cylinder are disk valves perforated with holes placed in a circle of smaller diameter than that of the holes in the heads, so that when either valve rests against the head, the holes of one head are closed by the outer margin of the valve. The piston rod is made hollow, and serves as a conducting pipe. Its lower end expands when it joins the diaphragm, and is provided with openings and flap valves.

Claim.—The disk valves D, perforated heads B, and ledges *a* in combination with the hollow piston rod G and valves *m*, and openings *o*, when these several parts are constructed, arranged and operated in connexion with the cylinder A, as and for the purpose specified.

No. 36,623.—H. C. SERGEANT, of New York, N. Y.—*Improvement in Steam Pumps.*—Patent dated October 7, 1862.—The nature of this invention consists in placing the crank shaft between the heads of the steam and pump cylinders just above or below the piston rod, and revolving it by means of two cranks and side rods, the power being obtained from the back end of either the steam or pump cylinder.

Claim.—The arrangement of the steam and pump cylinders, balance-wheel shaft, cranks and connecting rods, as specified in the foregoing specification.

No. 36,624.—T. F. ROWLAND, of Green Point, N. Y.—*Improvement in Machines for Planing Metals.*—Patent dated October 7, 1862.—The bar to be planed is placed upon the sliding bed between the spring bits and moved along the side cutters planing the sides of the bar simultaneously.

Claim.—Fitting the cutters C within the uprights *b*, in the manner herein shown and described.

No. 36,625.—F. S. ROBINSON, of Boston, Mass.—*Improvement in Machines for Separating Cotton Waste.*—Patent dated October 7, 1862.—The claim and engraving explain the nature of this invention.

Claim.—The combination of the supporting bar D, one or more series, F F G, of teeth, (applied to a rotary carrier as specified,) and mechanism by which each range of teeth shall be caused, during the revolution of the carrier, to seize the waste as it may project from the bar D, and draw it out therefrom, and separate it more or less, and subsequently let go of it in the manner substantially as hereinbefore explained.

No. 36,626.—S. H. SUGETT, of Eden, Maine.—*Instrument for Reaming Out the Barrels of Ships' Pumps.*—Patent dated October 7, 1862.—This instrument is designed to be used for reaming out the barrels of ships' pumps when they are so worn that the plungers will not operate. It can be used without removing the barrel, and consists of a piston turned by a handle at its top, having near the bottom a chamber closed at the bottom by a removable plate and communicating with the outside of an elongated opening, in front of which is the plate and cutter. The cutter is similar to that of a spoke-shave and capable of being adjusted at different angles, so as to make a heavy or light cut. The shavings made by the cutter pass into the chamber, and are thus prevented from clogging the barrel.

Claim.—The reaming instrument with its cutter *i*, chamber *b*, and movable plate *a*, the whole being arranged substantially as set forth for the purpose specified.

No. 36,627.—J. C. THOMSON, of Buffalo, N. Y.—*Improvement in Apparatus for the Manufacture of Illuminating Gas.*—Patent dated October 7, 1862.—The compound retorts consist of two conical vessels placed one within the other, separated by an annular space. The inner retort is divided by a grating across the middle into chambers, and also has cast on it a pipe or chamber, which communicates with the part under the grating, and also with a pipe. In the lower part of this chamber is a piece of brick placed at an angle. A flange attached to the top of the inner retort forms the cover of the outer retort, and the dome-shaped cover of the inner retort communicates with the eduction pipe. The lower division of the inner retort is connected to the annular space by V-shaped cavities; the various chambers, with the exception of the part under the grating, having been filled with coke or charcoal and brought to a red heat. Petroleum is conducted into the annular space, and is thus converted into permanent gases and hydro-carbon vapors, which pass into the open space *g*, where it meets globules of water in the spheroidal state thrown off from the red-hot sloping surface in the chamber into which water is conducted. The globules, acting by catalysis, convert the vapors into permanent gases, which pass with the vapor and water through the grating into the chamber *f* filled with red-hot coke, where they are further decomposed, and thence pass through the eduction pipes into the washer.

Claim.—A compound retort D D′ containing three chambers *f g h*, constructed, arranged, and used (either vertically or horizontally) for the purposes and substantially as herein set forth.

No. 36,628.—G. J. WASHBURN, of Worcester, Mass.—*Improvement in Annealing Iron and Steel Wire, &c.*—Patent dated October 7, 1862.—The object of this invention is to obtain a means for annealing wire in such a manner that it will prevent it from being oxidized or "scaled," and hence it will not be required to be exposed to the injurious acid bath. This is effected by placing the wire in a vessel provided with pipes or cocks, so that the air can be displaced by some non-oxydizable gas.

Claim.—In the process of annealing wire or other articles, the use of such an artificial atmosphere or gas, or mixture of gases, in the annealing pot or vessel, as will enable me to control the degree of oxidation of the iron or steel being annealed, or to prevent oxidation entirely, substantially in the manner herein described.

No. 36,629.—G. B. WIGGIN and J. W. HOARD, of Providence, R. I.—*Improvement in Nail Machines.*—Patent dated October 7, 1862.—The inventors say: These improvements are more especially applicable in connexion with a double set of cutters and heading devices, and of a feeder which operates in combination therewith to provide for the cutting of the nails with a proper degree of taper without turning over the plate, but some of them are or may be applicable with equal advantage in machines which have but a single set of cutting and heading devices, and which turn over the plate between the successive cutting operations. The improvements relate to the heading apparatus and to the feeder.

Claim.—First, the combination of the heading die levers O O*, stirrups *j j**, and toggles *k k**, with the oscillating cutter-head F, in the manner herein shown and described.

Second, so applying the heading dies N N*, in the form of plungers, that they may be free to turn on their axes, substantially as and for the purpose herein specified.

Third, the employment, for drawing back the heading dies N N*, of hooks *l l** attached to the heading levers O O*, and arranged to operate substantially as described upon flanges *n n** provided on the said dies, for the purpose of turning them.

Fourth, the arrangement of the single pair of nippers D D′ to operate in combination with the two sets of holding dies, substantially as herein specified.

Fifth, supporting the whole of the feeder in a carriage R S, composed of a transversely-moving slide R and a standard S pivoted to the said slide, substantially as herein specified.

Sixth, the opening of the tongs by means of two pins *v v* arranged to operate substantially as herein set forth.

Seventh, so applying the guides T T, in combination with the carriage of the feeder, as to permit them to be raised up high enough to allow the feeder to be turned away from the cutters, substantially as and for the purpose herein specified.

No. 36,630.—LUMAN ANDREWS, of De Kalb, Ill., assignor to Himself and PHINEAS STEVENS, of the same place.—*Improvement in Telegraph Cables.*—Patent dated October 7, 1862.—This invention consists of a device to be used in the construction of submarine telegraphic cables for preventing the breaking of the same by allowing the cable, when any pressure may be applied to it, as by the anchor of a vessel, to stretch or yield, and so tend to prevent the cable from breaking.

Claim.—In combination with the cylinder A and the valves B B′ the sliding joint *m n* in the cable *a*, constructed and operating substantially as set forth.

Second, the arrangement of the cylinder A, the movable rings C C′, and wires *b b*, in combination with the sliding joint *m n*, operating as described.

No. 36,631.—EDWIN BLACKMAN, of Danbury, Conn., assignor to Himself and J. S. TAYLOR, of the same place.—*Improvement in Self-weighing Carts.*—Patent dated October 7, 1862.—The platform under the body is connected to a steelyard by a knife-edge pivot, and the steelyard is connected to the journal boxes in the same way. The steelyard F, under the tongue, is connected in the same manner to the prop, and is also connected at its extremity to a metallic bearing. When the cart is in motion the prop and platform are turned out of the way, but these when turned down are sufficiently long to raise the wheels off the ground, so that the pivots of the props form the fulcra, the body and tongue being the weight, the counterpoise being placed on the steelyards.

Claim.—The steelyard E and platform C, in combination with steelyard F and prop D, (or spring scales suspended from the cattle,) when constructed and applied to a cart substantially in the manner and for the purposes hereinbefore set forth.

No. 36,632.—A. H. PERKINS, of Janesville, Wis., assignor to Himself and J. M. MAY, of the same place.—*Improved Process of Treating Coal Tar to Manufacture Roofing Cement.*—Patent dated October 7, 1862.—This invention consists of a process of forming a cement from coal-tar by igniting the tar on its surface, and at the same time agitating it. By this process the lighter portions are consumed and evaporated.

Claim.—The new process herein described of treating coal-tar to form a cement material, for the purposes set forth.

No. 36,633.—G. L. WITSIL, of Philadelphia, Pa., assignor to Himself and THOMAS COCHRAN, of the same place.—*Improved Apparatus for Stirring and Mixing.*—Patent dated October 7, 1862.—This invention is explained by the claim and engraving.

Claim.—Two or more spiral rods or bars contained in a vessel of suitable form, one spiral rod being left handed and the other right handed, or the rods being otherwise so arranged, and caused to so revolve as to produce separate currents in and a thorough agitation and admixture of the contents of the vessel, in the manner specified.

No. 36,634.—L. A. ASPINWALL, of Ireland's Corners, N. Y.—*Improvement in Machines for Planting Potatoes.*—Patent dated October 14, 1862.—The trap-doors which close the openings are provided with pins which extend down from the bottoms of the doors through slots in the bottom plate of the cylinder and in the bottom of the machine. These traps are kept shut during the rotation; the openings pass over the solid parts of the bottom plate, but fall open successively as they come over the openings, thus permitting the potatoes to escape at the proper time, and preventing them from being crushed between the plate and edge of the opening.

Claim.—First, the box or magazine to contain the seed potatoes, having a hollow cylindrical revolving bottom, with openings in its upper and lower plates for the passage of the potatoes down into the ground; the openings in the upper plate being provided with a gage to regulate their size, also with trap-doors, operating automatically, to protect the potatoes from injury, and regulate their passage through the hollow bottom, substantially as described in this specification.

Second, the combination of the box or magazine, so constructed and fitted as described, with the gearing for revolving the bottom, and with the plough and scraper, substantially as set forth in the specification.

No. 36,635.—A. B. BAILEY, of Middle Haddam, Conn.—*Improvement in Caps for Coffin Screws.*—Patent dated October 14, 1862.—The flat ear when the cap is closed passes into the slit, and within the prominence, and bears against it with a slight upward pressure, thus forming a light and firm joint.

Claim.—The flat ear or lug *d* of the cap B, in combination with the slitted prominence *b* on the base A, when arranged as shown, to form a new and improved catch or fastening for an ornamental cap for coffin screws, as herein set forth.

No. 36,636.—ZACHARIAH BAKER, of Erie, Ill.—*Improvement in Tanning.*—Patent dated October 14, 1862.—The nature of this invention will be understood from the claim.

Claim.—The use of the oats and barley chopped (unbolted) in connexion with the salt for a bath, as combined and in the proportions set forth in my specification, and also the use for a tanning compound composed of the smart-weed, May weed, oxalic acid, kino, catechu, potash and red sanders, as combined and in the proportions subtantially as set forth and mentioned in my specification.

No. 36,637.—ROBERT BARCLAY, of Buffalo, N. Y.—*Improvement in Chronometer Escapements.*—Patent dated October 14, 1862.—This invention consists in substituting for the springs ordinarily used, an arm and pallet of repose, combined and arranged as shown in the engraving and acted upon by a spring of any length which at one end is attached to a fixed point, while the other end presses against the toe of the arm, and keeps it down on the spindle, while it also presses the pallet into the escape-wheel, as far as permitted by the pin.

Claim.—The arm *h* made with a toe *i*, the pallet of repose *e*, and the spring *j*, the whole applied in combination with each other and with the escape-wheel and lifting-pallet, substantially as and for the purpose herein specified.

No. 36,638.—A. M. BEEBE, of West Bloomfield, N. Y.—*Improvement in Whiffletrees.*—Patent dated October 14, 1862.—This invention consists of the arrangement of the eveners with the whiffletrees, as shown in the engraving, in a system for three horses when driven abreast in such a manner as to place the whiffletrees exactly on a line with each other, thus allowing the tugs of all the horses to be of equal length and affording each horse an even central shaft.

Claim.—The combination and arrangement of the equalizing eveners A B and D with the whiffletrees *a b* and *d*, for three-horse teams, substantially in the manner specified.

No. 36,639.—WILLIAM BICKEL, of Pottsville, Pa.—*Improvement in Stoves.*—Patent dated October 14, 1862.—The object of this invention is to facilitate the burning of very fine coal in stoves and furnaces, and consists in introducing air into the body of the coal fire box in such a manner as to insure a circulation of air through the entire mass and the perfect combustion of the whole.

Claim.—The employment or use of an air chest D, placed centrally in the fireplace of a stove or furnace, communicating with the ash box thereof, and provided with horizontal tubes F, in combination with tubes G, attached to the sides of the body of the stove or furnace, and communicating with the external air, substantially as and for the purpose herein set forth.

Also, the valve I, placed within the air chest D, and the covers or slides H, applied to the outer ends of the tubes G, for the purpose of regulating the admission of air into the fire-box as specified.

Further, the triangular form of the tubes F G, and the inclined ends, when used as and for the purpose herein set forth.

No. 36,640.—L. G. BRADFORD, of Plymouth, Mass.—*Improved Apparatus for Leathering Tacks.*—Patent dated October 14, 1862.—The tacks pass from a hopper along an inclined

guide until they come in contact with the separator, having a notch in its extremity in which the tack fits, and having a reciprocating movement over the stand C, given it by means of one end of a lever attached to its extremity while the other end moves in a cam groove on a pulley F. Upon the upper surface of the separator is a latch pivoted to the stand, and having in it a groove in which moves a pin upon the separator, and thus gives motion sufficient to throw the latch out of the notch of the separator when by its forward motion it is carried to the mouth of the receptacle.

Claim.—First, the application and use of the horizontal reciprocating separator D, for taking the tacks singly from the foot of the inclined guide plane, and carrying them to the receiving dies or other receptacle for holding the tacks during the process of being driven through the leather or other material.

Second, the combination with the reciprocating separator of the self-acting latch *b*, for throwing or removing the tacks from the notch *a*, or its equivalent.

No. 36,641.—LAZARE CANTEL, of New York, N. Y.—*Improved Canteen.*—Patent dated October 14, 1862.—This invention consists in lining leather canteens with tinfoil or other metal which will not be acted upon by the liquid contents, said foil being cemented to the leather so as to adhere firmly.

Claim.—The lining of metal to the leather canteen, applied substantially as specified.

No. 36,642.—JOSEPH CHASE, of Lowel, Mass.—*Improvement in Machines for Cutting Flocks.*—Patent dated October 14, 1862.—This invention is an improvement in the construction of ordinary flock machines, and consists in arranging over the stationary knife and opposite the knife cylinder an inclined plate which serves to direct the flock to the collars, and retain it thereon, and thus secure an uniform supply.

Claim.—The plate I, placed within the cylinder A, and arranged relatively with the knife cylinder D, to operate as and for the purpose herein set forth.

No. 36,643.—J. E. CULVER, of Hudson, N. J.—*Improvement in Steam Generating Apparatus.*—Patent dated October 14, 1862.—The object of this invention is to obtain a combination of steam and gaseous products of combustion at as low a temperature as posible, and thereby not only obviate the difficulties attendant upon the use of steam and gases at a high temperature, but to generate the greatest quantity of steam attainable from a combustion of a given quantity of fuel. The furnace is placed within the boiler and communicates with the external air by means of two openings, through one of which coal is introduced, and through the other ashes taken out. Air is forced in the upper opening and passes downwards through the diaphram into the fire-box. The heated gases from the combustion are thus forced into the air space between the outer and inner shell of the furnace and thence through the outlet into and through the system of flues which are submerged in the water contained in the boiler, and finally escape through minute orifices in the lower flues, rising up through the water, and is mingled with the steam. Reticulated diaphrams being placed across the boiler in order to subdivide the bubbles, the gases in their passage through the flues heat the water sufficiently to generate steam, and thus are reduced to a temperature low enough to combine safely and properly with the steam.

Claim.—First, the combination within the boiler of a furnace B, a system of submerged flues E E, and one or more reticulated diaphrams *d*, substantially as herein specified.

Second, the furnace B, constructed with internal fire-box C, grate D, diaphram M, air inlet *a*, passages *f f*, chamber *g*, and outlet F, the whole arranged substantially as and for the purpose herein specified.

Third, the combination of the boiler A, furnace B, fire-box C, grate D, diaphram M, air inlet *a*, passages *f f*, chamber *g*, outlet F F, and flues E E, the whole constructed and arranged to operate substantially as herein specified.

No. 36,644.—JACOB DELONG, of Covert, N. Y.—*Improvement in Harrows.*—Patent dated October 14, 1862.—The nature of this invention will be understood from the claim and engraving.

Claim.—The bars *a a*, arranged or disposed so as to cross each other at right angles, in combination with the teeth C and the sockets D E, the teeth passing through the sockets and bars, and the sockets adjusted to the bars and made to clamp the same by means of the screws or bolts *d* which fit in the angles with the bars, substantially as and for the purpose herein set forth.

No. 36,645.—H. H. ELWELL, of South Norwalk, Conn.—*Improvement in Locks.*—Patent dated October 14, 1862.—The object of this invention is to obtain a lock which can be used equally well on right or left-hand doors. The latch or catch bolt is made with two bevels, having reverse angles, and situated one above the other, with a space between. The nosing is made with two slots, and at different distances from the end and corresponding to the situations of both bevels. When the lock is used, one or other of the bevels, according to whether the door is right or left handed, slips into the slot in the strike, while the other enters the strike as in ordinary locks.

Claim.—Having the bevels *a a'* arranged one above the other upon the bolt B, so that the inclined surface of each bevel will extend entirely across the face of the bolt, all as set forth.

No. 36,646.—SAMUEL FRETZ, of Buckeye, Ohio.—*Improved Hand Seed-Dropping Device.*—Patent dated October 14, 1862.—This invention consists in combining a slide with a seed box, lever, spring, and seed slide in such a manner that by pressing the implement down on the ground the slide will be forced upward, and the seed slide actuated through the medium of the lever and spring.

Claim.—The combination of the slide C, lever D, seed slide E, and spring F, all arranged and applied to the box A provided with the cut-off *a'*, to operate as and for the purpose herein set forth.

No. 36,647.—WILLIAM GILFILLAN, of Syracuse, N. Y.—*Improvement in Devices for Closing Gates.*—Patent dated October 14, 1862.—Upon a standard attached to the door post is pivoted the double cam, to one end of which is fastened a cord which passes over the cam E and connects it with a stud on the door. The other end of the cam is connected by a suitable elastic cord with some point on the side of the door frame. When the door is opened the cord B, acting on the end of the cam E, causes the other cam to draw on the elastic cord, and though the tension of this is increased by opening the door, the rotation of the cam diminishes the leverage and thus causes the force to decrease as the door is opened.

Claim.—The employment of the double cam F G for the purpose of graduating the force applied to the door, constructed and arranged substantially as set forth.

No. 36,648.—FREEMAN GODFREY, of Grand Rapids, Mich.—*Improvement in Stump Extractors.*—Patent dated October 14, 1862.—When the ropes to which the team is attached commence to draw from the circumference of the fusees, the chain attached to the stump is over the smallest part of the grooved cone, and as the ropes are unwound and the leverage decreases, the leverage on the cone increases. By this means the greatest effective power is applied at the commencement of the operation, at which time the greatest power is required, but as the resistance of the stump decreases, the power of resistance also decreases, and, consequently, an increase of velocity is obtained.

Claim.—The spirally-grooved truncated cone C, provided with a journal bearing at each end, and having rigidly secured upon it at one end a bevel gear wheel D, in combination with the bevel pinions *a a*, shafts E E and fusees or spirally-grooved wheels G G, when arranged to operate in the manner and for the purpose specified.

No. 36,649.—PETER HAYDEN, of Pittsburg, Pa.—*Improvement in Lamps.*—Patent dated October 14, 1862.—The wire clasp is hinged in the middle to the chimney ring and extends about two-thirds around, so as to clasp and secure it firmly. It can, when desired, be thrown up and out of the way so as to permit the detachment of the chimney.

Claim.—A wire clasp extending about two-thirds around the chimney ring, shaped and operating as described.

No. 36,650.—R. P. HENRY, of Akron, Ohio.—*Improved Machine for Scouring Marble and Freestone.*—Patent dated October 14, 1862.—This machine is laid flat upon the stone and a reciprocating and semi-rotary motion given it by means of the pitman. The sand, which is placed in a funnel-shaped vessel, falls upon the convex distributor placed under it; thus it is directed to the circumference of the central opening or eye, when it mingles with water flowing out from a proper aperture, and then worked under the bottom of the machine by means of the grooves.

Claim.—First, constructing a machine for scouring marble and freestone, with a vessel for holding water, in combination with a central vessel for holding sand, substantially as and for the purposes described.

Second, the use and employment of a funnel-shaped vessel, fitted to the eye of the machine and opening into it, for holding dry sand and delivering it upon the stone, substantially as set forth.

Third, the combination with the central sand receptacle of the convex distributor C.

Fourth, the combination of the curved grooves D with the central eye C, substantially as set forth.

No. 36,651.—A. P. HOPKINS, of Bentleysville, Pa.—*Improved Fence for Sheep Folds.*—Patent dated October 14, 1862.—The square posts of which this fence is constructed are provided with sharp picket ends and are set diagonally or with two angles contiguous, while between the posts are sharp trap irons, as shown in the engraving. It is designed more especially for sheep folds, and by its peculiar construction is an efficient protection from dogs, who will not jump a fence unless it affords some support for the hind legs during the act. In case the dog should attempt to jump he would slip off the sharp ends and be caught by the fore legs in the trap.

Claim.—Constructing fences with posts A and trap irons *c*, substantially in the manner and for the purpose set forth.

No. 36,652.—JOHN JACOBS, of Columbus, Ohio.—*Holder for Pens, Pencils, &c.*—Patent dated October 14, 1862.—The claim and engraving explain the nature of this invention.

Claim.—A tubular penholder, adapted to receive the human finger into or through it, and a writing pen, pencil, or brush upon its outer surface, and to maintain its place upon the finger, and to support and confine the pen, pencil, or brush in position during the operation of writing, marking, or coloring, substantially as set forth.

No. 36,653.—CHARLES KATHAN, of Hardin, Iowa.—*Improvement in Grain Separators.*—Patent dated October 14, 1862.—The slide placed under the fixed side of the hopper is retained by suitable guides, and has a reciprocating movement given it by means of a system of levers connected with the shaft of the fan wheel, so that it passes intermittently below the lower edge of the fixed side of the hopper, and thus prevent the discharge orifice from being clogged. Under the hopper, but a little in advance, is the shoe provided with the inclined sieves, to which a lateral shake motion is given by connecting it with lever F. Grain falls from the hopper upon these sieves, where all light impurities are blown away by the blast from the fan, and the lighter and inferior portions of the grain, passing through the screens near their lower ends, fall upon the screen O under it and the shoe I. The better grain falls on the shoe J, having a simultaneous movement with H, where, by the screw L, the oats are removed and sift the inferior grain, all passing into trough Q. The adjustable board allows a greater or less portion of grain to fall from screen I upon screen *b*, as its quality may require.

Claim.—First, the slide D placed underneath the fixed slide *b* of the hopper C, arranged and operated substantially as shown, for the purpose herein specified.

Second, the two shoes E, provided, respectively, one with the sieve I and the other with the screen L and sieve M, and connected together so as to be operated simultaneously by the same mechanism, in combination with the fan B and adjustable board T, all arranged as and for the purpose herein set forth.

No. 36,654.—I. A. KETCHAM, of Brooklyn, N. Y.—*Improved Apparatus for Operating Submarine Batteries.*—Patent dated October 14, 1862.—This invention consists of an apparatus by means of which an explosive shell or battery may be projected from the side, bow, or stem of a vessel, in any direction or position under the surface of the water, and exploded while it is held beneath, or after it has been left under the object which it is desired to destroy.

Claim.—First, advancing a submarine battery and adjusting it to any suitable position to be exploded by means of a sliding rod C, substantially as and for the purposes described.

Second, passing the rod C through a universal joint, substantially as described, to enable its adjustment to any position desired, and relieve the battery and rod from any effect by the rocking or rolling of the vessel.

Third, the casing A and sliding gate B, employed in the manner explained, to constitute a closable water-tight compartment for the reception and attachment of the battery.

No. 36,655.—J. W. KOEHLER and FREDERICK RICHARDS, of Decatur, Ill.—*Improvement in Wind Wheels.*—Patent dated October 14, 1862.—This invention consists in the application of a cap and shield to a wind wheel, arranged in such a manner that only a portion of the wheel is exposed to the action of the wind, which is thus made to act on the wheel in the most favorable manner for driving the machinery. Attached to this cap is a projecting arm, having at its extremity two rods, which can, by being braced upon the annular platform H under them, retain the cap in any desired position, so as to expose a greater or less number of buckets to the wind, and thus regulate the speed. The adjustable vane admits of being turned down when not required for use.

Claim.—First, the cap or shield D when applied to and used in combination with a horizontal wind wheel C, substantially as and for the purpose set forth.

Second, the horizontal, circular, or annular platform H applied to the framing A', in combination with the pendant bar G and rods *e e*, arranged as shown, for the purpose of adjusting the cap or shield, and retaining it relatively with the wind and the exposed buckets of the wheel C, to regulate the speed thereof, as described.

Third, the hinged or adjustable vane F, in combination with the rotating and adjustable cap or shield D and wheel C, as and for the purpose specified.

No. 36,656.—L. J. KNOWLES, of Warren, Mass.—*Improved Apparatus for Operating Submarine Batteries.*—Patent dated October 14, 1862.—The piston I, moving in the cylinder J, has attached to it an ordinary slide valve which moves backward and forward in the steam chest. Exteuding from this steam chest into the cylinder J are the steam ports *a a* and exhaust ports *b b*, extend from the cylinder into the exhaust pipe. The piston rod of the piston I plays freely through the head of the vertical arm attached to the main piston rod, and on said head are inclined faces which bear against the edge of the tappets on the rod *c* so as to give it a slight rotary motion. The steam, entering in front of piston B, forces it backward, and thus a rotary motion is given to piston I so as to bring the ports *h h'*, one over exhaust port *b*, the other over steam port *a'*, thus exhausting steam from space *p*, and admitting it so as to force the piston forward and operate slide valve H.

Claim.—Operating the slide valve H by means of a piston I, or its equivalent, which is just brought into a proper position to take steam, substantially as described, by a partial rotary motion derived from the engine, and which is then driven by the steam independently of the engine, substantially in the manner described.

Also, the employment of oblique openings or ports *h h'*, in combination with the piston I and the steam passages of its cylinder, substantially as and for the purposes set forth.

No. 36,657.—PETER LAMB, of Cincinnati, Ohio.—*Improvement in Car Trucks.*—Patent dated October 14, 1862.—The object of this invention is to economize in the application of steel springs to car trucks, and at the same time obtain a truck that will have greater elasticity than the ordinary ones, and be capable of running more easily and smoothly over the track. It also enables the shoe bars to yield readily to the break mechanism.

The invention consists in a novel construction of the car truck, whereby two springs are made to answer for the truck instead of four hitherto used. The invention also consists in a novel way of suspending the shoe bars to the truck, whereby the former may be readily attached to and detached from the latter.

Claim.—First, constructing the car truck of two parts connected together by springs D D, arranged substantially as herein described.

Second, attaching the springs D D to bars C, which are connected at their ends by links B to rods *d*, which pass through pendents *b*, and have nuts *e* on them, for the purpose of regulating the tension of the springs, as set forth.

Third, securing the links I to the shoe bars H, and cross bars *i* of the truck, by means of the sockets J, provided with recesses *k* and slides *l*, arranged as herein described.

No. 36,658.—J. S. LASH, of Carlisle, Pa.—*Improved Washing and Wringing Machine.*—Patent dated October 14, 1862.—This invention is designed to combine in one machine a washer and wringer. It consists of a box mounted upon legs, having part of its bottom inclined, and the rest somewhat lower and level, forming a tub. In bearings on the sides of the tub are a series of rollers, above which is the reciprocating rubber, consisting of a flat board with round slats nailed on its under surface. Each side of this board is connected by elastic bars *d*, with a cross bar which moves in grooves in the sides of the box parallel with the inclined bottom. The handle E consists of a cross bar connected by suitable supports to the rubber. The frame G has a vertical play in the frame on the tub end of the box, and has an opening through which passes the shaft of the rollers S S', which have their bearing in the upright H. The frame G can be elevated or depressed by lever R and pitman O, and thus is made to regulate the pressure of the rollers.

Claim.—The gate or movable frame G, the pitman O, the lever R, the roller S, the rubber C, the springs *d d*, the grooves *f f*, and the rollers *g g*, the whole arranged in the manner and for the purpose herein fully set forth and described.

No. 36,659.—WILLIAM JONES, of Rochester, N. J.—*Improvement in Coal Sifters.*—Patent dated October 14, 1862.—Under the drawers are placed the bars E, with their ends framed loosely into the front and rear sills, and which are somewhat convex on their upper sides, so as to bear tightly under the centre of the drawers, when the front end of the bar is forced up by the tightening screws D, the points of which press against a level shoulder under the tenon at that end.

Claim.—Tightening the joints between the draws B and T, and the case A, for the purpose of preventing the escape of dust or ashes from the apparatus during the process of sifting, by means of the adjusting bars E, which are constructed and arranged substantially in the manner specified, and operated by the set screws D.

No. 36,660.—A. E. LYMAN, of Williamsburg, Mass.—*Improvement in Ventilating Coffins.*—Patent dated October 14, 1862.—Attached to the coffin is a tube which is connected with an elastic chamber made of India-rubber; and connected with the tube leading from the coffin is another tube leading to a suitable exit pipe, and also provided with a stop-cock. The expansion of the elastic chamber will indicate the presence of foul air in the coffin, which can, by regulating the stop-cock, be allowed to escape.

Claim.—The indicating ventilator, as herein described and substantially set forth.

Also, the combination and application and arrangemnet of the aforesaid apparatus, and mode of applying the same for purposes as before described and substantially as set forth.

No. 36,661.—W. W. MARSH, of St. Louis, Mo.—*Improved Device for Raising Water by Steam.*—Patent dated October 14, 1862.—The steam syphon consists of a steam pipe, a delivery pipe and suction pipe, all connected by a T-shaped connexion. The steam pipe passes part way through the connecting pipe and is of smaller diameter than it, so that a space is left between the two pipes.

The invention consists in placing opposite at the mouth of the steam pipe a small cone, which is designed to spread the steam as it issues from the pipe, and thus facilitate the expulsion of air.

Claim.—The combination of the cone *b* with the pipes C A D, in the manner and for the purpose herein shown and described.

No. 36,662.—W. L. MCDOWELL, of Philadelphia, Pa.—*Improvement in Grates for Stoves.*—Patent dated October 14, 1862.—The draw bar consists of two parts, one of which is rigidly attached to the grate and extends therefrom, while the other is movable, and when in position is directly over the fixed part and extends across the grate from front to rear in the form of two connecting grate bars. The spaces between the bars are open from front to rear, there being no cross-bar to interfere with the motion of the hooked end of the poker when introduced for raking the fire. A free vibration can be given the grate whether the whole of the draw bar is in place or not, and when the movable portion is withdrawn, sufficient space is left for discharging the cinders, simply by vibrating the grate.

Claim.—The combination of a draw bar with a vibrative grate, so that it shall form a moving part of the same, and operate substantially as described for the purpose specified.

No. 36,663.—SAMUEL MCELROY, of Brooklyn, N. Y.—*Improvement in Hydrants.*—Patent dated October 14, 1862.—The shape of this valve is shown in the engraving; it is made of brass or other suitable material with a chamber to take leather or other packing. It is provided with a valve-trunk or cylinder into which a screw on the valve-shaft takes. To the end of the valve-shaft is attached the bevel-wheel D, into which gears the horizontal wheel E at the end of the rod, properly supported by guides cast on the hydrant tube and adapted at its upper end to receive a hydrant wrench. The valve is supported in its opening and closing motions by lugs cast on each side of chamber A'. The valve seat hub is cast with a chamber to take the valve seat, and is secured to the tube by a face joint, and cast with an expanded hub to have the spigot end of the hydrant pipe connected with the street main.

Claim.—The combination and arrangement of the vertical hydrant tube A, adapted to any form of head, having a base A' chafabered to take the valve motion described, with the valve seat hub B, and with the internal movable valve-shaft and valve *c c1 c2 c3* operated externally, substantially as described.

No. 36,664.—JAMES MCINTYRE, of New York, N. Y.—*Improvement in Compound Explosive Shells.*—Patent dated October 14, 1862.—This invention consists in arranging around a rod within an ordinary bombshell a number of grenades or cylinders charged with powder. Near each end of the rod is a head, on which projections at the extremities of the grenades fit, and thus they are held firmly in position. The grenades can be rotated so as to be brought successively under the fuze hole of the bombshell, and then charged, the space between the grenades and shell being then filled with powder and a fuze inserted. When the bombshell is exploded the fuzes of the grenade are ignited, and they are thrown from the shell and explode separately.

Claim.—The grenades *a a*, introduced between the heads *b b*, and fitted so as to be rotated upon the shaft or axis *c* within the bombshell *d*, as and for the purposes specified.

No. 36,665.—J. R. MILLS, of Bloomfield, Iowa.—*Improvement in Pumps.*—Patent dated October 14, 1862.—In the middle chamber is a partition separating it from the water in the well, in which is a valve opening upwards. Under the partition is the bridge tree hinged at its back to the backside of the chamber-box, and at its front end suspended by a chain from a hook on the curb above the ground. When the tree is raised by the chain a projection upon it immediately under the valve *j* raises the valve and allows the water in the middle or discharge chamber to escape into the well, and thereby prevents its freezing in cold weather.

Claim.—The valve *j*, partition *a*, bridge tree or lever J, projection *m*, and rod *k*, when combined and arranged to operate in the manner and for the purpose specified, and in combination with the above the piston packing, constructed and operating substantially as described.

No. 36,666.—J. O. MONTIGNANI, of Albany, N. Y.—*Improved Clothes-hanging Apparatus.*—Patent dated October 14, 1862.—The pins for suspending garments are attached to a metal shaft pivoted at top and bottom into the frame and cross-bars, so as to allow the pins to be turned into a plane parallel with the bars and within their range. This frame can be attached to a wall by one or two points of support, thus avoiding its defacement, and can easily be removed and packed in a small compass for transportation.

Claim.—A frame having between its bars pins for suspending garments or other articles to fold within the range of the bars, constructed and arranged substantially as described, and for the purposes set forth in the within specification.

No. 36,667.—T. H. MURPHY, of New Orleans, La.—*Improtement in Hemp Brakes.*—Patent dated October 14, 1862.—This machine can be constructed double or single, that is, having two separate breaking implements arranged at opposite ends of the feeding apron, so that after one end of the stalks is operated on, by reversing the motion of the feeding table the other half can be brought under the breakers without any change in the position of the fibre. When a single machine is used, the stalks are, by reversing the motion of the table, thrown out from between the rollers, then turned, and the ends of the stalks acted upon. The

rotary breaker consists of a wheel having on its periphery projections, and the flexible worker consists of a band passing over pulleys above the breaker, and having on it parallel transverse bars which come in contact with the projections on the wheel. The upper feed roller is mounted in levers; the shaft on one end having three pulleys, two being loose, and one fast; two bands, one straight, the other crossed, connect the main shaft of the breaker with the shaft of the feed roller. The motion of the feed roller, which is connected by a gear-wheel to the roller of the feed table, can be changed when desired.

Claim.—The combination of the reversible aprons *d*, with two sets of rotary breakers *i*, flexible workers *o*, and feed rollers *a a'*, all constructed, arranged, and operating substantially in the manner set forth, so as to operate upon opposite ends of the stalks without reversing their position.

No. 36,668.—J. O. NORTON, of Wilton, Ill.—*Improvement in Harvesters for Broom Corn.*—Patent dated October 14, 1862.—This machine is designed for cutting broom-corn at any desired height, and depositing the same when cut in gavels upon the ground. The cutters are first adjusted to the required height from the ground, and the gathering bars and shields adjusted to the cutters and secured by set screws. The reel frame is then set at a proper height and the belt tightened by means of pulleys. The parts are put in motion by the drivers' throwing the pinions in gear, the discharge of corn being governed by his foot acting upon a lever.

Claim.—First, the combination of the horizontal main frame *a*, driving wheel *c*, vertical frame *f*, and rear support *y z*, constructed and arranged as and for the purpose set forth.

Second, the combination of the cutters *i*, gatherers *j*, shields *k*, and discharging boxes *s*, when arranged, to operate substantially as and for the purpose explained.

Third, the self-opening shutter *t*, connecting rod *v*, and foot lever *w*, when used in the manner described to control the discharge of corn from the inclined boxes *s s*.

No. 36,669.—JOHN PETTENGILL, of Carrol, N. H.—*Improvement in Machines for Digging Potatoes.*—Patent dated October 14, 1862.—Under the beam and behind the vertical sides of the machine is a projecting beak, which enters the ground under the potatoes so as to throw them upon the inclined grid C, consisting of a series of bars, and these upon the endless grid or apron which is rotated as the machine is drawn along upon its two spoked wheels by a toothed wheel F engaging with one of them. Here the earth is separated from the potatoes, and they pass off the frame E to the rear of the machine. The deflector attached to the beam just in front of the beak is provided with knives, which cut the vines and force them laterally out of the path of the machine.

Claim.—The horizontal beak or nose *b*, an inclined plane or grid *c*, the endless grid D, and the wheel F, on the same, the deflector H, and knives I I, arranged and combined together, substantially in manner and so as to operate as and for the purpose specified.

No. 36,670.—W. M. RANDALL and G. C. HOWARD, of Belleville, Ohio.—*Bottom for Type Cases.*—Patent dated October 14, 1862.—This invention consists in arranging a printer's type case in such a way that each box in the case may be adjusted in relation to the bottom, and that by sliding it down, the type will be elevated to the top of the case, or as high as may be desired by the compositor.

Claim.—The application to the case A of the bottom B, arranged with blocks *c c*, so as to fill each box N N, in the case A, as described, with the springs D and springs E, and ratchet bars F, to operate as set forth, whereby the case may be elevated or depressed, as the convenience of the operator may require, all to be used in combination for the purposes above named.

No. 36,671.—S. H. RICHARDSON, of Cleveland, Ohio.—*Improvement in Stump Pullers.*—Patent dated October 14, 1862.—This invention consists of a bed-piece having proper supports, between which is placed a lever on a pivoted fulcrum. One end of this lever is bent, and has attached to it a hook which can be placed under the stump. The other or long end of the lever is provided with a pulley and a series of ropes which pass over pulleys at the rear end of the bed-piece. Upon the front of the frame is a windlass by which, when it is desired to operate the machine, the lever is raised and its hook attached to the stump; by then drawing on the rope attached to the long end of the lever, the latter is depressed and the stump drawn out.

Claim.—The herein-described arrangement of the bed-pieces A A' A'', in combination with the pivoted fulcrum D, lever C, windlass H, pulley K K' and *m*, and rope L, all operating as and for the purpose set forth.

No. 36,672.—J. S. ROWELL and M. F. LOWTH, of Beaver Dam, Wis.—*Improvement in Seeding Machines.*—Patent dated October 14, 1862.—This invention consists in a peculiar construction of arched caps which cover the seed cylinder, whereby the seed, in passing from the hopper into the ground, is prevented from being crushed between the cylinder and cap. The invention also consists in the employment of a forked or friction brace, connecting

the shank or standard of the cultivator tooth to its drag bar, for the purpose of allowing the tooth so connected to yield, and thus prevent its being broken, bent, or otherwise injured by any obstruction.

Claim.—First, the triangular openings *d* and groove *s* in the cap I, in combination with the seed cylinders H, when arranged to operate in the manner and for the purpose specified.

Second, the combination of the forked or friction base M with the pivot *k* for connecting the shanks K and consequently cultivator teeth J to their drag bars L, substantially as described.

No. 36,673.—S. W. RUGGLES, of Fitchburg, Mass.—*Improvement in Stump Extractors.*—Patent dated October 14, 1862.—This invention consists in the employment of two shafts or drums of unequal diameter, geared together by cog-wheels, in combination with a rope or chain extending from said shafts round the sheaf of a block, and with a strut or derrick, from the top end of which said block is suspended, and from which a hook, or chain, or other suitable device extends to the stump or other article to be raised or extracted in such a manner that, by imparting a rotary motion to the two shafts or drums, the rope unwinds on one while it winds up on the other, and, owing to the difference existing between the diameters of the two shafts, the motion of the block, as compared with that of the power imparting motion to said drums, is very small, and the working parts are without much friction, and consequently a powerful and multiplied strain is exerted on the derricks, and thereby the stump is raised.

Claim.—The combination of the sheave K, strut M, and rope or chain J, with geared drums of unequal diameters C D, substantially in the manner herein shown and described.

No. 36,674.—GELSTON SANFORD and J. E. MALLORY, of New York, N. Y.—*Improvement in Machinery for Breaking and Cleaning Flax and Hemp.*—Patent dated October 14, 1862.—The object of this invention is to subject the fibre of flax or other like substance to a longitudinal and transverse rubbing action similar to that given by hand when the fibre is gripped between the thumb and finger of both hands, and a short vibratory motion given while pressing the stalks between the rubbing surfaces, whereby the woody part and cementing matter is effectually removed from the fibre. This is effected by feeding the flax to a roller having upon it circumferential grooves, and under which pass, and bear against it on a portion of its periphery, a series of endless chains or ropes, one for each groove. These endless chains pass over rollers, by which a forward motion is imparted, and they are alternately slackened and tightened by passing over a many-throw crank or similar device. They are thus caused to press the flax into the grooves of the main roller, and at the same time they slide upon and rub it; rubbing action is thus given the fibre both in the direction of and across its length.

Claim.—The combination of a grooved surface, or the equivalent thereof, with a series of chains, or the equivalent thereof, having a mode of operation substantially such as herein described, and for the purpose set forth.

No. 36,675.—GELSTON SANFORD, J. E. MALLORY, and C. P. HAYES, of New York, N. Y.—*Improvement in Machines for Breaking Flax, Hemp, &c.*—Patent dated October 14, 1862.—The upper roller is mounted in proper boxes on each side of the main frame, and is rotated by means of the gear-wheel upon its shaft-gearing, with a pinion on wheel *j*, which is rotated by a band connecting it with shaft *k* below the rollers. The teeth of the rollers interlock, and thus motion is imparted from one to the other; but a reciprocating motion is given the lower roller by mounting it in sliding boxes connected by a transverse bar, connected by connecting rods to two cranks on the main driving shaft. This reciprocation gives a beating action on the fibre to the rollers, in connexion with the rubbing and breaking caused by their rotation, and thus more effectually separates the woody part from the fibre. The cleaned fibre passes into the perforated apron, which, owing to its having one of the rollers on which it revolves attached to the sliding boxes, has a shaky motion given it, and thus the broken fragments of the woody part are thrown out from the cleaned fibre.

Claim.—Giving to one or more of the fluted breaking rollers a vibrating or beating motion, in combination with the rotary motion, substantially as and for the purpose specified.

Also, in combination with the breaking rollers, or their equivalents, giving a vibrating or shaking motion to the previous apron, substantially as and for the purpose specified.

No. 36,676.—JOHN SIMPSON and WM. HAYDEN, of Tecumseh, Mich.—*Improvement in Grain Cleaners.*—Patent dated October 14, 1862.—Reference to the description and drawings will be necessary for an explanation of this invention.

Claim.—First, the cone below the saucer, by which the separation of the grain is secured, and its even delivery at the moment of its being acted upon by the current of wind, exposing the largest surface both of the grain and impurities to the action of the current of wind.

Second, the combination of the several parts as above described, in the manner and for the purpose indicated, in connexion with the curb spindle and stones of an ordinary flouring mill, as well as attached to other machinery, like an ordinary smutter.

Third, the double surface scourer indented from the opposite surface.

No. 36,677 —W. D. SLOAN, of New York, N. Y.—*Improvement in Hoop Skirts.*—Patent dated October 14, 1862.—The object of this invention is to increase the elasticity of the hoops, and at the same time diminish the weight.

Claim.—Combining corrugated wire, suitably wrapped and formed into hoops, substantially as described, with cords, straps, or other equivalent means for connecting and holding the hoops, for the purpose set forth.

No. 36,678.—F. M. STRONG and THOMAS ROSS, of Brandon, Vt.—*Improvement in Platform Scales.*—Patent dated October 14, 1862.—This invention relates to an improvement in what are commonly called "drop-lever scales," these being arranged so that when not in use, or when being loaded, the levers are lowered down from the platform, which then rests upon the frame of the scale The object of this invention is to render the adjustment of the scales as perfect as possible by the use of devices by which the knife edges are preserved from the wear incident to the usual method, and the friction of the "beam" with the parts attached to and operating with it is reduced.

Claim —In the construction of "drop-lever scales," the use of the auxiliary levers D D D′ D′, in combination with the rock-shaft K, connecting-rods E E, and links *h h*, or their equivalents, the whole operating substantially in the manner described and for the purpose specified.

Also, the use of the shields or washers *b*, provided with angular ridges or projections *c*, in combination with the knife edges *a* and loops *d*, as set forth.

No. 36,679.—GEORGE TAINTER, of Watertown, Mass.—*Improvement in Dampers.*—Patent dated October 14, 1862.—This invention consists in placing the hinged conical damper within a drum or cylinder which is in communication with the flue or pipe of the stove or furnace, and is larger in diameter than the flue or pipe, and placing the ventilating register within the drum or cylinder.

Claim.—The combination of the conical damper D and register C, when fitted in a drum B larger in diameter than the pipe or flue A, substantially as set forth.

No. 36,680.—ALBERT TAPLIN, of Providence, R. I.—*Improvement in Lamps.*—Patent dated October 14, 1862.—This invention is explained by the claim and engraving.

Claim.—First, the attachment of a spring to the cone or chimney-holder, to secure the chimney to the same, when the chimney-holder, cone, and chimney are removed from the cap for trimming and lighting the lamp, substantially as and for the purpose herein described.

Second, in lamps having the cone or chimney-holder connected to the lamp cap by a hinge, making that part of the hinge attached to the chimney-holder of the same piece of metal with the holder, and that part of the hinge attached to the lamp cap of the same piece of metal with the cap, substantially as described and for the purpose set forth.

No. 36,681.—WILLIAM TERRY, of Birmingham, England.—*Improvement in Breech-Loading Fire-arms.*—Patent dated October 14, 1862; patented in England April 7, 1856.—To the rear end of the barrel of a breech-loading fire-arm is adapted a sliding piston, the rod of which passes through a hole in a piece of metal forming part of the rear end of the barrel. Upon the piston rod are two lugs or projections which fit within corresponding recesses in the breech piece after the cartridge has been pushed into its place, and thus the piston is secured. These projections have their outer ends bevelled in opposite directions, so that, after the projections have been freed in the recesses by giving the piston rod a slight turn, the bevelled end coming in contact with the back of the recess will force the conically-shaped head of the piston firmly into a corresponding seat in the barrel and thus form a tight joint. Hinged to the end of the breech piece is a lever H H′, which is acted upon by a spring attached to pieces G, by which the lever is retained in place. A portion of this lever fits into the slot used for the introduction of the cartridge; it thus serves the double purpose of a handle to withdraw and replace the piston, and also as a means for keeping it in place, so as to be flush with the barrel and the hammer be operated as the piston rod passes through a recess which contains an oiled vessel by which it is lubricated.

Claim.—The mechanical construction and arrangement of the various parts marked D E *e* E′ G *f* H H′ I K M N O and P hereinbefore particularly described, set forth, and represented by the illustrative sheet of drawings hereunto annexed, together with the mode of operating with the same, for the purpose of introducing the cartridge into the barrel of the fire-arm, and for presenting a substantial and efficient abutment for the powder to act against for discharging the contents of the barrel from the mouth of the fire-arm, as above stated.

No. 36,682.—W. O. THOMAS and A. M. MILLER, of Fond du Lac, Wis—*Improvement in Journal Boxes.*—Patent dated October 14, 1862.—The outside shell of this journal box is made of iron, which is filled with limestone and then bored out to fit the journal. It is claimed that this journal box absorbs oil readily, heats slowly, and is very cheap and durable.

Claim.—A new article of manufacture consisting of a journal box composed of limestone and metal, as herein specified.

No. 35,683.—THEOPHILUS VAN KAUNEL, of Chester, Ill.—*Improved Machine for Stoning Cherries.*—Patent dated October 14, 1862.—This device consists of a frame having an opening in each of its four sides and provided with a feeding hopper with an inclined bottom leading into the frame. Under the hopper is a four-armed gravitating lever, one arm of which extends through the bottom of the hopper and acts as a feeder to force a single cherry through the passage. Within the frame is a vertically sliding receiver, made concave at its centre, from which descends a cylindrical passage for conducting off the stones removed from the cherries. Attached to the slide is a finger piece, arranged to swing upon a vertical axis at one side, and serves to strip the cherry from a series of barbed needles projecting from the centre of the under part of the top of the frame. The finger piece is kept in position off from the centre of the slide by means of a spring. The cherries are fed separately to the slide when they are stoned, the stones being discharged separately in one direction and the pulp in another direction.

Claim.—First, the gravitating feeding device D, substantially as and for the purpose described.

Second, the vertically sliding receiver or concave E *f g* with a central passage *h* through it, in combination with a series of barbed needles *m* and with the gravitating feeder D, substantially as and for the purposes described.

Third, the pivoted spring finger piece, applied and operating substantially as described, for the purpose set forth.

Fourth, the organization of the machine, as described, so that it will feed the cherries separately, stone them separately, and discharge the stone in one direction and the cherry meat or pulp in another direction, substantially as and for the purposes set forth.

No. 36,684.—D. C. WILSON, of Painesville, Ohio.—*Improvement in Tailors' Press-Board Holders.*—Patent dated October 14, 1862.—This invention consists of an iron staud having a lengthened foot, by which it may be attached to a board or table. The upper part of this stand is provided with a rectangular opening in which a press-board can be inserted, being supported in a horizontal position by a projecting table forming a part of the stand platen, to which it is attached by a screw passing through the top of the stand, so as to hold the press-board firmly in position, but permits it to be readily disengaged when required.

Claim.—As a new article of manufacture, a tailor's press-board holder, constructed and arranged and being of the portable character, as herein particularly described, and operating as set forth.

No. 36 635.—T. C. BRECHT, of United States Army, and S. B. SIGESMOND, of Washington, D. C., assignors to Themselves and JOHN KULIUSKI, of Washington, D. C., and J. H. HOUSEWRIGHT, of New York, N. Y.—*Improvement in Combined Cloak, Tent, Bed, &c.*—Patent dated October 14, 1862.—This invention consists of a sheet of water and air-tight fabric doubled so that it can be inflated and thus be made to form a bed or mattress, Attached to one side is a sheet of cloth which may be used as a cover, and at the extremity is a flap which, when supported by props, forms a roof over the head of the soldier lying on the bed. This tent, when uninflated, can be folded up and carried on the knapsack, as shown in the engraving. It may be used as a cloak, and it also can be suspended so as to form a hammock; it can be used as a mattress in an ambulance, and also, by its buoyancy, can be used as a life-preserver.

Claim.—First, a portable tent made of a double water and air tight fabric, in the manner and for the purposes substantially as specified.

Second, the herein described arrangement for changing a cloak into a *tente d'abri*, hammock, ambulance, and life-preserver.

Third, a combined cloak, tent, hammock, ambulance and life-preserver, constructed substantially as herein described.

No. 35,686.—M. L. CALLENDER, of New York, N. Y., assignor through mesne assignments to C. H. WELLING, of the same place.—*Improvement in Compound Explosive Projectiles.*—Patent dated October 14, 1862.—In the axis of the projectile is bored a hole, the lower part of which contains powder. Upon this powder rests a bar of steel which is provided with a pointed end which extends from the projectile. This bar is also bored and contains a magazine of powder; the remainder and rear portion of the bore contains a tube with a percussion tube or nipple inserted into one end, while the other end is closed by a perforated plate. In this tube is a ball which moves freely. When the projectile strikes an object the ball is thrown forward and strikes the percussion cap, which ignites the fuze and explodes the charge in the shell. The bar of steel is thus driven forward and exploded at the proper time by the powder in its magazine.

Claim.—A projectile having a steel bar or centre inserted on a line with its axis when said bar contains an independent exploding magazine.

Also, the combination in a projectile of a discharging chamber and penetrating bar of steel or similar metal having an exploding magazine within it and supplied with a percussion and fuze apparatus, for the purpose and in the manner as set forth.

No. 36,687.—W. D. GRIMSHAW, of Newark, N. J., assignor to Himself and C. A. TEN EYCK, of New York, N. Y.—*Washing Machine.*—Patent dated October 14, 1862.—This This invention consists in arranging a pair of corrugated rubbing rollers above a pair of smooth squeezing rollers. The lower corrugated roller is in a fixed bearing, and its shaft is provided with a crank and fly-wheel which gears with a pinion upon the shaft of the upper squeezing roller, which is also placed in a fixed bearing. The shaft of the lower roller rests in sliding bearings so that the two rollers, by means of side levers connected to these slides and a cross foot lever, can be brought in contact.

Claim.—The arrangement of the pairs of washing machine rollers *c c* and squeezing rollers *f f*, in the manner specified, so that the power to revolve said rollers is applied to the two middle rollers, while the upper and lower rollers are yielding, for the purposes set forth.

No. 36,688.—H. B. MORRISON, of Mount Morris, N. Y., assignor to C. H. MORRISON, of Le Roy, N. Y.—*Improvement in Nozzles for Hose and Pipes.*—Patent dated October 14, 1862.—This device consists of a straight nozzle in connexion with a curved nozzle, which latter is attached to a sleeve placed loosely upon the straight nozzle, and so arranged together as to admit of water being discharged in one or two streams at the same time. The nozzles are provided respectively with tips, which are secured obliquely on the same, so that by turning the tips the direction of the streams may be varied from a straight line with the nozzle to a line quite angular therewith.

Claim.—First, the revolving or adjustable tips J K applied to A F of hose water pipes, as and for the purpose set forth.

Second, the arrangement of the nuts B E, thimble C, sleeve D, when used in combination with the nozzles A F and sleeve G, to operate as and for the purpose herein described.

No. 36,689.—G. H. SMITH, of Rochester, N. Y., asssignor S. O. SMITH, of the same place.—*Improvement in Illumination.*—Patent dated October 14, 1862.—The nature of this invention is explained by the claim.

Claim.—First, the use of common atmospheric air in the place of oxygen gas in the combustion of illuminating gas or its equivalent, for the production of a high degree of heat, when such atmospheric air has been previously heated, and in that condition is forced by means of properly arranged jets into intimate contact with the illuminating gas at the moment of combustion, substantially in the manner herein above set forth.

Second, the use of common atmospheric air in the place of oxygen gas in the combustion of illuminating gas or its equivalent, for the production of an intense degree of light, when such atmospheric air has been previously heated, and in that condition is forced by properly arranged jets into intimate contact with the illuminating gas at or before the moment of combustion, both being at the same time made to impinge upon a suitable piece of lime or other known equivalent, substantially in the manner above described.

Third, the use of common atmospheric air in the combustion of illuminating substances, such as illuminating gas, oils, or hydrocarbons or their equivalents, for the production of an increased degree of light, when such atmospheric air has been previously heated, and in that condition is brought in intimate contact with any of said illuminating substances at or before the moment of combustion.

No. 36,690.—JAMES WARD, of Boston, Mass., assignor to Himself and I. F. HUNNEWELL, of the same place.—*Improvement in Brick Machines.*—Patent dated October 14, 1862.—This machine is designed to mould the clay in a comparatively dry state, so as to make what are technically called pressed brick. It consists of a circular matrix plate or bed, in which are two concentric rows of brick matrices formed vertically through it, provided with sliding bottoms. These matrices are made to pass under two pulverizing and pressing rollers, which are so geared as to operate together and in connexion with the revolving bed.

Claim.—The arrangement of the pulverizing and pressing rollers I I, in combination with the revolving series of moulds, when geared and operated conjointly in the manner and for the purpose specified.

No. 36,691.—J. S. HALL, of Pittsburg, Pa.—*Improvement in Machine for Forging, Bending, and Shaping Ploughshares.*—Patent dated October 14, 1862.—This invention consists in the employment of a die-block and pressing dies, so arranged and constructed as to form a ploughshare from a single piece of steel or iron having a vertical and horizontal cutting edge. The pressing dies are made in two parts, one being stationary and the other movable.

Claim.—First, the die B for drawing down, bevelling, and shouldering the blank, substantially as and for the purpose herein described.

Also, in combination, the dies C D for griping, bending, and forming the ploughshare, when constructed and operating substantially as herein described.

No. 36,692.—SAMUEL ADLAM, Jr., and JEREMIAH R. FOGG, of Portland, Maine, assignors to SAMUEL ADLAM, jr., aforesaid.—*Improvement in Lamp Burners.*—Patent dated October 14, 1862.—A broad band encircles the wick tube and rises slightly above its top. On the top of this band is a projection, which extends out horizontally. On this projection the flange

of the cone rests, and is secured by a pivot. The opposite side of the cone is secured to the wick tube, and the upper part of which fits in a notch in the flange of the cone. On loosening this spring the cone can be moved horizontally on its pivot.

Claim.—So combining a chimney and lamp that the chimney may be removed from over the wick of the lamp by a horizontal lateral movement of the chimney and without detaching the chimney from the lamp, for the purpose set forth.

No. 36,693.—D. B. CHAPMAN, of Milford, Mass., assignor to Himself and E. D. DRAPER, of the same place.—*Improvement in the Manufacture of Soap.*—Patent dated October 14, 1862.—The object of the flour is to enable alkaline silicate more readily to unite with the soap. The soda effects a combination of the flour with silicate, and also prevents any decomposition of the silicate of the flour.

Claim.—The combination of a carbonate or caustic soda with an alkaline silicate and vegetable flour, combined with soap or a saponified oil or fat, substantially as described.

No. 36,694.—B. R. ALDEN, of New York, N. Y.—*Improvement in Lamp Burners.*—Patent dated October 21, 1862.—This invention consists of a deflector constructed of porcelain, pottery, earthenware, or other similar non-conductor of heat, the same being applied to a case or jacket which surrounds the wick tube.

Claim.—First, a lamp burner provided with a cone or deflector constructed of porcelain, pottery, earthenware, or any baked earth or earthy cement, substantially as set forth.

Second, the combination of said cone with the case or jacket C, arranged substantially as and for the purpose specified.

No. 36,695.—J. F. ALLEN, of New York, N. Y.—*Improvement in Valve Gear of Steam Engines.*—Patent dated October 21, 1862.—This invention relates to the means of moving the valves in that class of steam engines in which the steam and exhaust ports are opened and closed by separate valves which slide upon their seats in operating, and it consists in the employment of an eccentric rod which, at a short distance from the eccentric, is divided into two rods attached, respectively, to arms secured to separate rock shafts, by the vibration of which latter, motion is communicated through other arms and rods to separate valves for admitting the steam or for releasing it, or for both purposes, at opposite ends of the cylinder, the object being to give to the valves a slow motion after the ports have been covered, and at the same time to give them a more rapid motion while the ports are open than would be imparted to them by the eccentric rod directly.

Claim.—The herein-described arrangement of valves, worked by means of separate rods and levers operated from the action of a single eccentric, the whole being combined and operated in the manner and for the purpose substantially as set forth.

No. 36,696.—W. W. ANDREWS, of Warrensville, Ohio.—*Improved Belay Cleats for Boats.*—Patent dated October 21, 1862.—Within a suitable framework is suspended a pendulous weight upon a shaft, which must lie in a line parallel with the keel of the vessel, and at right angles with the beam. Upon one end of the said shaft is secured a cam, the face of which is concentric with the shaft. To the frame are also attached triangular clutches. The parts are so arranged that when the vessel is steady the line will remain taut; but in case the vessel careens, by means of a sudden flaw, the line or rope will be instantly released.

Claim.—The special arrangement of the pendulated weight B, cam D, and clutches E, in combination with the pins F and springs K, the several parts being arranged substantially as and for the purpose set forth.

No. 36,697.—D. M. AYER, of Lewiston, Maine.—*Improvement in the Harness Motion of Power Looms.*—Patent dated October 21, 1862.—This invention consists in a method of controlling the operation of the harness of a power loom for fancy weaving, whereby the weaving of a long and very varied pattern is provided for without the necessity of using a pattern chain of great length. The construction of the machine does not admit of a brief description.

Claim.—First, the construction of a pattern chain of a series of pin-jointed links, provided with mortises *a a* and a series of pin bars Q Q, fitted to slide longitudinally in the said mortises, substantially as and for the purpose herein specified.

Second, the drum T, having a series of pins 16 16 16° 16° spirally arranged on its periphery and the cam S, applied and operating in combination with each other, and with the sliding bar R′, or its equivalent, carrying guides R R or other devices for the purpose of shifting the sliding pattern pin bars of a pattern chain or cylinder, substantially as herein set forth.

Third, the employment for producing the longitudinal movements of the drum T upon its shaft U of a screw thread 40 in the hub, two levers X X′, and a spring catch 26, applied within the shaft, a pin 34 attached to the drum, and a spring Y applied between the drum and shaft, the whole combined and operating substantially as herein specified.

No. 36,698.—J. S. BARDEN, of New Haven, Conn.—*Improvement in Water Meters.*—Patent dated October 21, 1862.—This invention consists in the arrangement of a series of devices named in the claim, in the operation of which a continuous rotary movement is given to the shaft, so that an indicating apparatus may readily be applied to register the number of movements of the pistons, and that the crank of each piston, while at its dead point, will be helped over the same by the pressure of the other piston on its own crank. The cranked shaft is inserted in two stuffing boxes, each of which has a concentric tenon, which enters a corresponding opening or passage through the side of the case so as to admit of the ready removal and replacement of the said shaft.

Claim.—The above-described arrangement of the eduction passage, valve chest, water chambers, cylinders, pistons, valves, and valve-operating mechanism, as applied in manner and so as to operate together substantially as set forth.

Also, the tenoned stuffing boxes and the slides, applied in the case and its partition and shaft K, substantially in manner and for the purpose as specified.

No. 36,699.—H. B. BECKMAN, of Newburyport, Mass.—*Improved Automatic Stop Motion for Steam Engines.*—Patent dated October 21, 1862.—The object of this invention is to effect, automatically, the stoppage of a steam engine, water-wheel, or other motor regulated by a governor whenever the latter stops by reason of the breaking or slipping off of its driving band or otherwise, and the invention consists in the arrangement, in connexion with a stop valve or gate provided with a spring or weight, of a hook or catch which holds the said valve open while the governor is in operation, but which is caused by the stoppage of the governor to liberate the valve and allow it to be closed by the spring or weight applied for the purpose.

Claim.—The catch lever E *c d*, arranged and applied in relation to the governor, and in combination with the stop valve or gate, substantially as and for the purpose herein specified.

No. 36,700.—L. A. BEEBE, of Chicago, Ill.—*Improvement in Machines for Shelling and Cleaning Corn.*—Patent dated October 21, 1862.—In the frame or head at the front end of the shelling cylinder is a semicircular opening, over which is secured a plate which may be so adjusted as to regulate the size of the opening for the escape of the cobs. In connexion with the shelling apparatus is a shoe provided with inclined boards and screens, and also a fan blower and elevator, by means of which the corn is cleaned after being shelled.

Claim.—First, the semicircular discharge aperture *a* and the corresponding adjustable plate *a'*, combined and arranged as set forth for regulating the discharge of cobs from the mill.

Second, combining with the shelling apparatus, constructed as herein described, the shoe D, with its inclined boards *c d'* G, screens *l d* and trough *e*, the fanning mill E F, and elevating trough H, all arranged and operating as a whole, as and for the purposes herein set forth.

No. 36,701.—JOHN BURNSIDE, of Washington, D. C.—*Improvement in Portable Houses.*—Patent dated October 21, 1862.—This invention consists in the employment of hooks attached to the posts and used in connexion with notches made in the upper edges of the weather-boards fitted to the hooks in the posts so that the lower edge of one board will hold the upper edge of the next board below it.

Claim.—The hooks in the posts in combination with the notches in the boards, for the purpose of making the lower edge of one board hold the top edge of the board next below it, substantially as described.

No. 36,702.—H. H. COOLEY, of Battle Creek, Mich.—*Improvement in Pistons for Force Pumps.*—Patent dated October 21, 1862.—This invention consists in constructing the piston with two water passages and a valve chamber, the latter being provided with a ball valve and communicating with the tubular piston rod, so arranged in connexion with the pump cylinder, which is provided with suitable valves, as to throw a continuous stream.

Claim.—The piston A divided into three compartments *b b' c*, the latter *c* communicating with *a b* by means of the openings *d d'*, and provided with the ball valve C in combination with the tubular piston rod E and arranged to operate in connexion with a pump cylinder provided with a side water passage and suitable valves, as set forth.

No. 36,703.—A. C. DEWIES, of Crefeld, Prussia.—*Improvement in Lubricators.*—Patent dated October 21, 1862.—This invention consists in the employment of a glass vessel, into which a tube or cylinder is inserted, the mouth of the vessel being closed with a cork, through which the tube passes. The end of the tube, which is inserted into the vessel, is closed, with the exception of a minute orifice; a similar orifice, through which the oil escapes, is also made in one side of the tube. The lower or outer end of the tube is open, and fits closely upon the axle to be lubricated, so that when in repose no oil escapes, but when the axle rotates, the oil is drawn down and lubricates the journal, the vacuum caused in the vessel being filled by the air which percolates through the cork.

Claim.—The combination of the transparent vessel A, the stopper C, and the tube B, having its flow regulated by the perforations in the end within the vessel A, and the other end adjusted to the curvature of the shaft with the journal box D and shaft E, when the whole are constructed, arranged, and operate as described for the purpose set forth.

No. 36,704.—C. S. DIKEMAN, of New York, N. Y.—*Improved Composition for Treating Vegetable Paper.*—Patent dated October 21, 1862.—The ingredients of which this composition consists are a mixture of kerosene oil and spirits of turpentine, to be applied to the paper by means of a sponge or otherwise.

Claim.—The employment or use, for the purpose of preparing vegetable paper, of a composition made of the ingredients herein specified, and mixed together in or about the proportion and substantially in the manner described.

No. 36,705.—JACOB DOBBINS, of Litchfield, Mich.—*Improved Machine for Jointing and Dressing Staves.*—Patent dated October 21, 1862.—This invention relates to a method of dressing the staves so that stuff of different thicknesses may be readily operated upon, and so as to render the machine capable of being adapted to operate upon winding stuff. It also relates to a method of jointing the staves, whereby staves of different widths may be acted upon and bevelled, and the barrel heads also planed.

Claim.—First, the swinging segment bed H, provided with the clamp bar Q, and attached to a radius bar I, in combination with the rotary cutters D D', arranged to operate as and for the purpose herein set forth.

Second, the particular manner of arranging the radius bar I, so that its rack G may be connected with the driving pinion *k*, and be disengaged from it, to wit, by means of the frame J, catch M', and set screw P, as described.

Third, the yielding frame F', to which the gearing *j k* is fitted, when arranged with the spring *f*, set screw *h*, and gearing E *i*, to operate as set forth.

Fourth, the swinging supports and gauge bars U U, when used in combination with the swinging bed H and clamp bar Q, as and for the purpose specified.

Fifth, the sliding frame V, provided with the reversible bolster Y and clamp bar Z, in combination with the rotary cutters C C and bevelled rods C'' C''', as and for the purpose set forth.

Sixth, the dog bars D'' D''', when attached to the sliding frame V and used in connexion with the cutters C C, as and for the purpose specified.

No. 36,706.—SAMUEL GISSINGER, of Alleghany City, Pa.—*Improvement in Brick Machines.*—Patent dated October 21, 1862.—In the sides of the hopper are placed four staves for the purpose of supporting the arms *q*. Upon the upright shaft are also arms *y*, placed spirally, and the two sets of arms are so arranged that their thin edges approach each other and serve to break the lumps of clay before the latter enters the mould.

At the front end of the machine is arranged a press roller over the mould way. Upon the axle of the press roller rest two weighted levers for the purpose of regulating the pressure of the roller.

Claim.—The use of the bevelled arms *y* and *q* and the gauge *s*, when used in combination with the press roller *h*, lever *i*, and mould way *g*, arranged and operated substantially as herein described for the purpose set forth.

No. 36,707.—J. C. GOAR, of Jamaica Plain, Mass.—*Improvement in Belt Shippers.*—Patent dated October 21, 1862.—This invention consists in the arrangement of an oscillating double-elbow piece and a single spring locking pawl in combination with a two-notched shipping slide, which carries the belt guide, and with a lever, whereby, when the slide has been locked by the pawl with the guide in either of its two positions for guiding the belt, the pressure applied to the lever to shift the slide for shipping the belt will first cause the elbow lever to disengage the pawl from one notch of and so unlock the slide, and then give the latter the proper movement, and that when, after the movement of the slide has been given, the pawl is allowed to enter the other notch of and so lock the slide until the pressure on the lever is reversed.

Claim.—The combination with the belt slide C and the spring locking pawl E of the double-acting detacher and slide mover D, in the manner herein shown and described.

No. 36,708.—JAMES GREAVES, of Utica, N. Y.—*Improvement in Pumps.*—Patent dated October 21, 1862.—The nature of this invention will be understood by reference to the claim and engraving.

Claim.—The combination and arrangement of the flange 3 and base 2 2, as constructed and combined with the upper part 1 and spout 3, metal band 5, as fastened to the wood pipe 4, the elbow 9, and flange 10, as combined with the rod 7 and pipe 4, said pipe being the only support of the barrel 8, and the barrel 8 when constructed of stoneware or earthenware, all as shown in Fig. 1, as and for the purposes described.

Second, the rubber pipe 12, as combined with the iron pipe 11 and earthenware pipe 15, the enlargement 13, ring 14, and rod supporter 16, all shown in Fig. 1, all as and for the purpose described.

No. 36,709.—EDWARD GWYN and A. C. CAMPBELL, of Hamilton, Ohio.—*Improvement in Breech-loading Fire arms.*—Patent dated October 21, 1862.—The lever *a* revolves upon the fulcrum *b* and is attached to the breech-plug by means of a screw pin. As the lever is brought backwards and upwards against the stock, the rear end *m* of the breech-plug is held down by the spring *f* and serves as a guide, and, in connexion with the motion of the screw pin, directs the breech-plug into the rear of the chamber.

Claim.—First, the contrivance above described for withdrawing a breech-plug from its seat, depressing it to make room for the insertion of the cartridge, then elevating it, and afterwards carrying it longitudinally back to its seat, by the simple revolution of the screw pin backward and forward in the arc of a circle around a fixed centre, substantially as above set forth.

Second, the combination of the lever *a*, the fulcrum *b*, the screw pin *c*, the breech-plug *d*, with its guide *m*, and the spring *f*, constructed, arranged, and operated substantially in the manner and for the purpose above set forth.

No. 36,710.—N. S. HAMLIN, of St. Louis, Mo.—*Improvement in Physicians' Prescription Cases.*—Patent dated October 21, 1862.—This case is made of leather or other suitable flexible material formed with three flaps and provided with pockets for the reception of medicines, &c., and capable of being compactly folded so as to be conveniently carried about the person.

Claim.—The case A, consisting of three wings and a middle portion, each provided with pockets *d e f g* and *g'*, arranged in the manner and for the purpose set forth.

No. 36,711.—DERASTUS HARPER, of Crystal Lake, Ill.—*Improvement in Ploughs.*—Patent dated October 21, 1862.—This invention is explained by the claim and engraving.

Claim.—First, the standard A, constructed of wrought-iron in angle form, expanded at its lower part, and united at its upper part to form a solid flat bar, in combination with the mould board B, landside C, and share E attached to the stand, and all arranged as set forth.

Second, the bar or sole F of the landside C, constructed of wrought-iron in angle form at its back part, turned upward at its front part, and secured to the standard as shown, for the purpose specified.

No. 36,712.—G. H. HULSKAMP, of Troy, N. Y.—*For Piano-Forte Action.*—Patent dated October 21, 1862.—To the jack or hammer lifter is attached by a joint a detacher of the form shown in the engraving, which is pressed upward by means of a spring attached to the lever F upon the key, and bearing against a projection on the detacher until the upward motion of the detacher is arrested by a stop attached to its rear part. The form of the hammer butt and jack is shown in the engraving.

The height of the jack is regulated by means of a screw inserted in the key under one end of the lever F, a block of wood serving for a bearing for the other end of the said lever, which is secured to the key lever by a screw.

Claim.—First, the combination of the vibrating detacher J and its adjustable stem L with the jack I, substantially as herein shown and described.

Second, the form and peculiar construction of the hammer butt D of the jack I and of the detacher J, substantially as described.

Third, the mode of attaching the levers, hinge butts, &c., substantially as described, or its equivalent, for the purpose of preventing looseness, and the effects of shrinking and swelling.

No. 36,713.—G. H HULSKAMP, of Troy, N. Y.—*Improvement in Violins.*—Patent dated October 21, 1862.—In this invention the sounding boards or upper and lower sides of the instrument, instead of being rounded and curved as heretofore constructed, are made straight and the outer surface plain. The two ends of the instrument are composed of two solid rims made of hard wood, and to them are firmly glued the upper and lower sounding boards. From each of the rims proceed three braces, which unite near the centre of the instrument, and are there connected with a steel screw and two brass nuts, so that by turning the screw a pressure is transmitted from the centre through the braces to the rims, and the requisite strain is thus given to the sounding boards.

Claim.—First, the use of strained sounding boards in violins, and other instruments above named and referred to, of whatever material made, operating and constructed substantially as set forth.

Second, having the middle portion of the under sounding board, as shown at C C, made wider than the corresponding middle portion of the upper sounding board, substantially as and for the purpose herein shown and described.

Third, making one foot of the bridge to bear upon the upper and one upon the lower sounding board, either directly or by means of the tripod or post, as above set forth.

Fourth, the construction of the nut U and bridges, with the flat projection surface, substantially as described.

Fifth, the combination of the string-holder E with one or more internal braces H, substantially in the manner and for the purpose herein shown and described.

No. 36,714.—EDWARD JOHNSON, jr., of Cleveland, Ohio.—*Improvement in Cooking Stoves.*—Patent dated October 21, 1862.—This invention is explained by the claim.

Claim.—Making the oven plate of cooking stoves of one entire piece of corrugated sheet iron, as and for the purpose substantially as herein set forth.

No. 36,715.—J. J. JOHNSTON, of Alleghany City, Pa.—*Improvement in Wooden Soles for Boots and Shoes.*—Patent dated October 21, 1862.—This invention consists in the use of a detached, compressed, and elastic spring, when used in connexion with the inner and outer soles of boots and shoes; the soles being made of wood and in two or more parts. On the under side of the inner sole at the joint is a recess for the reception of a hinge, and in the upper side of the outer sole is a recess for receiving the spring which protects the joint.

Claim.—The use of the detached elastic spring *i* when used in connexion with the hinge *j*, recess *g*, outer sole *b c*, and inner sole *d e*, arranged, constructed, and operated substantially as herein described and for the purpose set forth.

No. 36,716.—J. E. KARELSON, of New York, N. Y.—*Improvement in Millstone Dressers.*—Patent dated October 21, 1862.—This invention consists in the arrangement of a V-shaped guide attached to the front edge of the hinged adjustable rule of a millstone dress, in combination with a V-shaped lug attached to the edge of the diamond holder in such a manner that the point of the diamond is prevented from falling down into the holes or cavities which occur in the surface of the millstones, and that lines of equal depth can be easily drawn. To the said rule are applied one or more serrated spring catches in such a manner that the operator is prevented from moving the diamond across the surface of the stone in the wrong direction.

Claim.—First, the arrangement of the V-shaped projection *l* at the front edge of the rule C, in combination with a corresponding groove *m* on the diamond holder H, constructed and operating substantially as and for the purpose shown and described.

Second, the application to the rule C of one or more serrated spring-bars G, substantially as and for the purpose specified.

Third, the arrangement of the adjustable slide *p* and spring *r*, in combination with the head *n* containing the diamond, and with the set screws *q* and *s*, and V-shaped groove *m*, all constructed and operating as and for the purpose described.

Fourth, connecting the rule C to the plate A by means of hinges *c c s*, or their equivalents, substantially as and for the purpose described.

No. 36,717.—A. C. KETCHUM, of New York, N. Y.—*Improvement in Lamp Burners.*—Patent dated October 21, 1862.—The object of this invention is to prevent the heat from being conducted down from the flame to the body of the lamp in such a degree as to volatilize the oil too rapidly, and at the same time to cause the flame to be supplied with air in a comparatively cool state, and in sufficient volume to insure combustion. The claim explains the nature of the invention.

Claim.—First, a lamp burner having a metal wick tube B surrounded by a case or jacket C of porcelain, pottery, earthenware, glass, or any baked or unbaked clay, or earthy substance, which is a good non-conductor of heat, substantially as and for the purpose herein set forth.

Second, a cone or deflector D, constructed of metal and enamelled both externally and internally, and applied to the case or jacket C, or to the lamp, substantially as and for the purpose herein shown and described.

No. 36,718.—C. KROGH and M. G. HOGNESS, of Kroghville, Wis.—*Improvement in the Mode of Raising Sunken Vessels.*—Patent dated October 21, 1862.—This invention consists in placing within sunken or damaged ships or other vessels air-tight bags or chambers of flexible material, in combination with inflexible air-tight chambers or floats around them, and forcing air into the said chambers or floats. At or near the bottom of the said chambers or floats are arranged openings for the introduction of air into the same, so that the openings may be sealed by the water itself, and the air be prevented from escaping from the vessel. To these openings are attached weighted flexible pipes by which their outer orifices are kept below the body of the float or chamber in case of the latter getting displaced in their operation.

Claim.—First, the employment, in combination with the flexible bags or flexible chambers for raising sunken vessels, of inflexible lifters applied outside the vessel, and operated substantially as herein set forth.

Second, the arrangement of the connexions of the air pipes for the admission of air to expel the water from the lifters, at or near the bottom of the lifters, substantially as and for the purpose herein specified.

Third, the weighted flexible pipes *f f* applied to the lifters, and operating substantially as and for the purpose herein specified.

No. 36,719.—W. H. LEECH, of Dunlapville, Ind.—*Improvement in Field Fences.*—Patent dated October 21, 1862.—This invention consists in the arrangement of a pacing board catching over the fence post and supporting the panel, in combination with the notched braces, which are secured by suitable keys in mortises in the ends of the pacing board in such a manner that the fence can be united and firmly supported without the use of nails.

Claim.—The arrangement of the pacing boards D in combination with the notched braces E, wedges *e*, notched posts B, and rails A, all constructed and operating substantially in the manner and for the purpose herein shown and described.

No. 36,720.—H. W. LIBBEY, of Cleveland, Ohio.—*Improvement in Vapor Baths.*—Patent dated October 21, 1862.—The floor of the bath is composed of wire gauze, beneath which is placed a metallic trough or pan for containing the fluid to be vaporized. A perforated seat is also provided, to which is attached a foot-rest. In the rear is a sliding back-rest, which can be adjusted to suit the patient. A neck-piece of oiled silk is so arranged as to prevent the escape of vapor, and allow the patient to breathe the fresh air.

Claim.—The perforated or wire-gauze floor A and adjustable trough B, in combination with the perforated adjustable seat C and foot-rest C′, adjustable back-rest D, and neck-piece G, the several parts being constructed, arranged, and operated as and for the purpose herein specified.

No. 36,721.—J. V. MEIGS, of Washington, D. C.—*Improvement in Breech-loading Fire-arms.*—Patent dated October 21, 1862.—This invention consists in imparting the proper movement to the breech-plug by means of a pin or projection upon it, which traverses in a slot on a link pivoted at one end, so as to be capable of moving freely around its pivot, the curvature of the slot being such that the motion of the link around its pivot traverses the plug to permit the insertion or withdrawal of the cartridge case, and, when the breech is closed, to hold it firmly locked.

Claim.—The combination of the reciprocating piston or breech-plug C with the pivoted, slotted link D, when constructed and arranged substantially as described, for the purpose set forth.

No. 36,722.—T. T. MORRELL, of Farmington, N. H.—*Machine for Making the Leaves of Books from a Continuous Sheet of Paper.*—Patent dated October 21, 1862.—The object of this invention is to combine the several operations of cutting, folding, ruling, and packing the leaves of blank books in one and the same machine in succession upon a continuous sheet of paper, in such a manner that the paper is first ruled upon both sides by two sets of fountain pens; second, the paper is cross-ruled with column lines into pages by means of properly arranged rules in the face of two rollers operating in connexion upon each side of the paper; third, the pages are numbered by means of a peculiar device which stamps the number of each page upon the upper corner thereof; fourth, the leaves are cut in folio form, one by one, from the continuous sheet; and fifth, the leaves thus cut are folded and deposited regularly in proper order, complete and ready for binding.

Claim.—First, in combination with one or more sets of fountain pens for ruling the horizontal lines of a page, a set of ruling rollers for printing the perpendicular lines, substantially as herein shown and described.

Second, the reciprocating paging apparatus arranged and operating substantially as shown and described, for the purpose specified.

Third, the peculiar cutting apparatus, arranged and operating substantially as described, for the purpose specified.

Fourth, the peculiar construction and arrangement of the folder *f* and the folding rollers P P, substantially as shown and described, for the purpose specified.

Fifth, the combination and arrangement of the several apparatuses composing the within-described machine, whereby the successive operations may be performed in their proper order upon a continuous sheet of paper, while in motion, substantially as herein specified.

No. 36,723.—A. F. NEWELL, of Warren, Ohio.—*Improved Fruit-Basket and Crate.*—Patent dated October 21, 1862.—This device consists of a skeleton crate bound at each end with hoop iron, so arranged that the band forms a hinge and clasp lock. Within this crate are packed a number of baskets of square form for holding fruit to be transported, so arranged as to protect the fruit, and at the same time allow it to be exposed to the fresh air.

Claim.—The within-described fruit-basket and crate, as a new article of manufacture, consisting of the sides A, cover C, band D, with loops F, and the baskets H, all constructed and arranged as and for the purpose substantially as set forth.

No. 36,724.—A. W. OLDS, of Green Oak, Mich.—*Improvement in Cultivators.*—Patent dated October 21, 1862.—The cultivator is so constructed as to be supported in part by one or more bearing wheels, so arranged and adjusted that a forward movement of the vehicle will cause a positive rotation of the cultivator. The form of the teeth is shown in the engraving.

Claim.—First, the adjustable axletree I, bearing wheels K and K′, in combination with the cultivator frame A B, axis C, and pipe-box E, when these parts are arranged and operated as and for the purpose specified.

Second, the bell-shaped, round-shanked tooth, constructed and operating as and for the purpose herein set forth.

No. 36,725.—OSCAR PADDOCK, of Watertown, N. Y.—*Improvement in Ice-Cream Freezers.*—Patent dated October 21, 1862.—This invention is explained by the claim and engraving.

Claim.—First, in ice-cream freezers of otherwise ordinary construction and operation, the method described of imparting rotary motion to the freezing vessel, while the scrapers are held stationary by the employment, in combination with a spindle bearing in a socket in the bottom of the freezing-vessel, of a pivot cast to the said vessel and bearing in a socket in the ice-bucket, the whole being arranged to operate substantially in the manner herein set forth.

Second, the employment of stirring blades arranged to the bottom of the cream-holder, to mix with the ice particles and dissolve the salt that shall have been carried to the bottom, substantially as herein set forth.

Third, in combination with a revolving cream-freezing vessel and stationary scrapers, the use of revolving beaters fast on the spindle, operating in connexion with stationary beaters fast on the scrapers, substantially in the manner and for the purposes set forth.

No. 36,726.—J. A. PEASE, of New York, N. Y.—*Improved Clothes Dryer.*—Patent dated October 21, 1862.—To a back piece formed of a flat piece of wood is hinged a swinging piece having attached to it a series of radiating arms upon which the clothes are hung. When not in use the swinging piece with its arms is folded down out of the way.

Claim.—The combination and arrangement of a clothes dryer, substantially as before described.

No. 36,727.—JOHN PLATT and WILLIAM RICHARDSON, of Oldham, England.—*Improvement in Machinery for Cleaning Wool.*—Patent dated October 21, 1862.—This invention consists in the employment of a roller against which is placed a fixed blade, between which latter and a reciprocating blade the wool or other similar material to be cleaned is introduced. In connexion with the above are used spiked rollers in combination with a comb and fixed spikes which draw off the material in detached tufts and present the same to the roller and blades.

Claim.—The combination of the spiked roller *c*, vibrating comb 6 7, toothed plate *h i*, roller *k*, breast *l*, vibrating blades *o* 12, bell crank levers 10, and connecting rods *z p* 9, all constructed, arranged, and operating substantially as and for the purposes shown and explained.

No. 36,728.—H. W. PUTNAM, of Cleveland, Ohio.—*Improved Clothes-Wringing Machine.*—Patent dated October 21, 1862.—The sides pieces are provided with a segment ratchet, pawl and cam, by which the machine is secured to the tub. The upper section of each side piece consists of a cylinder, in which is placed a coiled spring for pressing the rollers together. The ends of the rollers are covered by flanges or lips, both in front and rear, to prevent the clothes from being caught by the ends.

Claim.—The side pieces, constructed in pairs, and consisting of the parts A B C, ratchet D, cam E, and pawl F, in combination with the flanges or lips I I, arranged as and for the purpose specified.

No. 36,729.—JOHN RICHARDS, of Columbus, Ohio.—*Improvement in Lubricators for Scroll Saw Stocks.*—Patent dated October 21, 1862.—This invention consists in the combination with two separated bearing and guide boxes of an intermediate tubular lubricating device, the latter having its bore or chamber made with a greater diameter than the bore of the guide boxes, so that while the saw-stock is necessarily fitted snugly within the boxes, a space exists between the saw-stock and the tubular lubricating device, which space serves to contain cotton waste and lubricating fluid.

Claim.—The combination of the bearing and guide-boxes *c d*, intermediate casing B, and saw-stock, or the equivalent thereof, constructed, operating, and arranged substantially in the manner and for the purpose described.

No. 36,730.—JOHN RIDGWAY, of Boston, Mass.—*Improvement in Operating Ordnance.*—Patent dated October 21, 1862.—This invention consists in hanging and arranging cannon upon any suitable framework that can be revolved in a vertical plane either by steam-power or otherwise, in such a manner that the guns themselves shall travel either upon a portion or the whole of the circumference of a circle. With the above is combined such an arrangement of devices as will at the same time permit the guns to travel through the circle of any horizontal plane, so that they can be quickly brought into position to admit of their being rapidly loaded and discharged.

Claim.—First, so arranging and operating an apparatus for mounting guns that they can be susceptible of being revolved in a vertical plane the whole circumference of a circle, substantially as described, whereby they can be successively and rapidly brought to bear upon any desired point, substantially as described.

Second, in combination with the above, any suitable arrangement of device for giving a horizontal movement around the circumference of a circle to the guns, as described.

No. 36,731.—L. M. T. RIOT, of Paris, France.—*Improvement in the Manufacture of Soap.*—Patent dated October 21, 1862.—The nature of this invention is explained by the claim.

Claim.—First, the employment in the manufacture of soap, of oils and fats treated previously to the introduction of the alkaline lyes, with sulphuric or other acid, whereby the glycerine is rendered capable of contributing to and entering into the composition of the soap.

Second, the previous preparation of oils with sulphuric or other acid, in such a manner that their glycerine may thereby be rendered capable of entering into the composition of the soap, so that soap may be produced by a cold process, by the mere addition of alkaline lyes to such oil, and especially by the particular mode of proceeding by the cold process hereinbefore described.

Third, the mode herein described of manufacturing soap by a cold process, in which weak alkaline lyes are combined with olive or other oils, previously treated with an acid, for the purpose of converting their glycerine into a matter capable of entering into the composition of the soap.

Fourth, the manufacturing of what is herein described as a rational soap, which may contain from four to ten per cent. of soda; such soap being prepared by a cold process, as described, and with ingredients the proportions of which may be regulated before manufacture.

Fifth, the process herein described, in which tallows and fats, reduced to a liquid or fluid state, are treated with sulphuric or other acid, to convert their glycerine into a matter capable of entering into the composition of the soap, and are afterward combined with weak alkaline lyes so as to produce soap.

Sixth, the manufacture of soap by means of oil or fat, first treated with sulphuric or other acid (in such manner as to render the glycerine thereof capable of entering into the composition of soap) and then combined with weak alkaline lyes when a hot process is used.

Seventh, the preparation of olive oil for the manufacture of soap by a cold process, in so far as regards the treatment of such oil (before combining it with alkaline lyes) with sulphuric acid, in the proportion of six thousandth parts by weight of acid to one part by weight of oil.

No. 36,732.—ALFRED RIX, of San Francisco, Cal.—*Improvement in Door Latches.*—Patent dated October 21, 1862.—This device consists of an oscillating, angular bolt, which catches by its own gravity under a notched cap, in combination with a transversely moving ratchet slide, in such a manner that by moving the slide in one direction, the bolt is brought opposite the notch in the cap, and the door can be opened; and by moving the slide in the opposite direction, the bolt drops down by its own gravity and catches under the cap, when the door is locked. The parts are so arranged that the latch can be applied to either a right or left-hand door.

Claim.—The arrangement of the angular oscillating bolt A, in combination with the slotted transversely moving slide C and notched cap D, all constructed and operating substantially in the manner and for the purpose herein shown and described.

No. 36,733.—WILLIAM ROWAN and J. M. H. GILL, of Freeport, Pa.—*Improvement in Grain Screens.*—Patent dated October 21, 1862.—The screen is placed upon a fixed or adjustable bar, between friction rollers or other bearing surfaces, and operated through the medium of a crank, so arranged that a combined longitudinal and lateral vibratory movement will be given to the screen.

Claim.—The adjustable bar P, provided with the friction rollers *d d*, or equivalent side-bearing surfaces for the screen L, in combination with a crank or crank-wheel J, on which the upper or feed end of the screen rests, substantially as and for the purpose set forth.

No. 36,734.—G. K. SNOW, of Watertown, Mass.—*Improvement in Holders for Bills, Notes, &c.*—Patent dated October 21, 1862.—This device consists of one or more holders, made in the shape of a trough or tray, having an inclined bottom, and provided with a presser attached to the tray, so that by swinging, lifting, or rolling the presser, one or more notes will be admitted beneath it, and the same be held in position by the weight of the presser, and also be readily withdrawn when necessary.

Claim.—As a new article of manufacture, the tray or trough when made with a cross section, substantially as shown, and provided with a presser connected therewith, and operating substantially as described.

Also, the combination of two or more such trays or troughs, and their respective pressers, substantially as shown.

No. 36,735.—THOMAS SPENCER, of Syracuse, N. Y.—*Improvement in Salting Meats.*—Patent dated October 21, 1862.—After the deliquescent salts have been removed by washing the salt used in making the brine, they are neutralized by putting into the brine an equivalent of carbonate of soda.

Claim.—In the process of curing meats, making the brine by washing the salt to be used for packing, and thereby removing therefrom the deliquescent salts, and then neutralizing the deliquescent salts in the brine, substantially as and for the purpose herein described.

No. 36,736.—MILES SWEET, of Troy, N. Y.—*Improvement in Curry-Combs.*—Patent dated October 21, 1862.—This invention is explained by the claim.

Claim.—A curry-comb having separate trough-like comb bars A, secured to a back B by lugs or projections *c c*, formed in one piece with the back, and bent over upon and against the ends of the comb bars, substantially as herein set forth.

No. 36,737.—T. R. TAYLOR, of Cleveland, Ohio.—*Improvement in Machines for Nuts.*—Patent dated October 21, 1862.—This machine is composed of a sliding frame working in ways or guides, and operated by means of a crescent-shaped cam and crank. To this frame is attached, by means of articulated joints, a pair of jaws, which are wedge-shaped at their lower ends, so as to enter a slot in the bed-plate. Attached to the sliding-frame is a die M, which moves up and down with the same, and attached to a horizontal sliding frame is a moving die N, through the centre of which works a punch, by which means nuts of various sizes and forms can be made wholly by pressure from the heated bar, and punched ready for the screw-thread.

Claim.—The sliding-frame G, in combination with the jaws I I and dies M and N, when constructed and operating substantially as and for the purpose specified.

No. 36,738.—H. G. THOMPSON, of New York, N. Y.—*Improvement in Machinery for Sizing the Backs of Carpets.*—Patent dated October 21, 1862.—This invention consists in the employment of an inverted adjustable table, below which is a rotating brush, by means of which latter the back of the carpet is sized as it passes over the table. Between the rotating brush and the dryingcylinder there is interposed a series of longitudinal steam-pipes, connected at their ends with cross-pipes. A suitable mechanism is employed for the carpet and keeping it moving distended in passing under the table.

Claim.—First, the combination of the rotating brush and the adjustable table for the purpose described, the distance between the two being adjustable, substantially as and for the purpose described.

Second, the combination of the rotating brush and table with the mechanism for moving and keeping the carpet distended, substantially as and for the purpose set forth.

Third, the combination of the rotating brush, the table, the mechanism for moving the carpet and keeping it distended, and the drying and smoothing cylinder, substantially as and for the purpose described.

Fourth, the combination of the rotating brush, the table, the mechanism for moving and keeping the carpet distended, the drying and smoothing cylinder, and the interposed drying apparatus, or the equivalent thereof, for partially drying the sizing before it reaches the surface of the drying cylinder, substantially as described.

No. 36,739.—J. A. UNDERWOOD, of Grand River, Iowa.—*Improvement in Combined Harrow and Seed Drill.*—Patent dated October 21, 1862.—This implement is designed for sowing seed either broadcast or in drills, and at the same time to cover them in the earth by a rotary harrow, the parts being so arranged that the seed-distributing device may be readily rendered inoperative when necessary, as in turning at the end of a field, and the seed-distributing and harrowing device made to operate simultaneously by the forward movement of the machine.

Claim.—The combination of the adjustable wheel L, swivel-rod K, and lever M, with the wheels D, seed-box I, seed-cylinder H, and rotary harrow B, all in the manner and for the purpose herein shown and described.

No. 36,740.—P. S. WARD, of Millville, Iowa.—*Improvement in Bee-Hives.*—Patent dated October 21, 1862.—This hive is formed in two equal parts, between which are placed two metallic plates, so attached to either side as to be easily removed, and also to admit of either part being used separately or in combination. At the junction of the bottom and side boards on the outside of each part of the hive is fitted a triangular block having notches cut in the two inner sides, which open into a space formed by cutting away the bottom edge of the side board and a mortise in the bottom board, for the purpose of admitting the moth to lay its eggs, the same being prevented from entering the hive by a perforated metal plate on the inner side of the side board.

Claim.—First, the combination of the metallic plates H H, hooks and eyes *a b*, respectively, and rods *c c*, with the two parts of a divided hive, when the whole is constructed and arranged in the manner and for the purpose set forth.

Second, the combination of the blocks F and buttons *h*, or their equivalents, with the mortises *e f* and perforated plate *g*, when constructed and arranged in the manner and for the purposes set forth.

No. 36,741.—S. W. WARREN, of Brooklyn, N. Y.—*Improved Low-Water Detector.*—Patent dated October 21, 1862.—This invention consists in the employment of a vessel containing mercury within an outer casing, so coupled with a boiler or other reservoir containing water and steam that either water or steam, or both, may be present within the space between the mercury reservoir and its casing, as in a "glass water-gauge," and so that

when steam is present within said space, its heat shall expand the mercury, causing it to operate against an elastic diaphragm, and by expanding it, to operate through suitable connexions to make a valve for the purpose of sounding an alarm, or for letting off the condensed water from the steam heating pipe, and for various other purposes.

Claim.—The combination of the casing *b* with the steam and water pipes *c* and *d*, the mercury reservoir *a*, and an elastic diaphragm, when arranged so as to operate together to work a valve, substantially as and for the purpose set forth.

No. 36,742.—JAMES WEED, of Muscatine, Iowa.—*Improved Tree and Plant Protector.*—Patent dated October 21, 1862.—This device consists of a fixed and movable trellis combined, upon which trees or other plants may be trained as espaliers, over which are fitted to fold shutters and doors for the purpose of protecting the plants from the effects of ice and cold.

Claim.—First, the compound trellis C C′, arranged substantially as and for the purpose shown and described.

Second, the arrangement of the simple and folding shutters D D′, in combination with or without the trellis C, as and for the purpose specified.

No. 36,743.—JOSHUA WHITTEMORE, of South Reading, Mass.—*Improvement in Crutches.*—Patent dated October 21, 1862.—The crutch is composed of two separate pieces of elastic wood which are brought together and inserted within a socket-piece at their lower ends. Their upper ends are connected by means of a flexile arm-rest, consisting of a cushion or stuffed pad. Within the lower part of the crutch is a tapering socket provided with a screw nut for receiving a male screw which projects upward from a jawed socket-piece, the latter being made with a recess, within which and projecting from it is an India-rubber or elastic buffer. Above the recess the jawed socket is formed so as to receive and grasp the shank of a metallic spur which extends down either through or into the middle part of the elastic buffer.

Claim.—The crutch as made of two separate spring bars A A and the flexible arm-rest E, substantially as specified.

Also, the India-rubber or elastic buffer I, in combination with the crutch provided with a socket or buffer holder.

Also, the combination of the spur K with the elastic buffer and the crutch.

Also, the jawed socket-piece made in manner and to operate as explained, in combination with the crutch, elastic buffer and the spur, substantially as described.

No. 36,744.—M. G. WILDER, of West Meriden, Conn.—*Improvement in Machines for Milling and Cutting Metals.*—Patent dated October 21, 1862.—In this machine the several parts are so constructed and arranged as to enable any form or grade (either regular or variable) of spiral or bevel on any article or portion of the same to be cut as may be desired, by the use of a rack and pinion (one or more) in connexion with a bevel gear wheel and index and the swivelling or revolving and rotating motions of the main spindle, and the use of the adjusting screws at right angles (or otherwise) to be worked by hand, bands or gearing.

Claim.—The combination of the main spindle M with the revolvable ways G, when so constructed and arranged as to allow the spindle to revolve through a complete circle both horizontally and vertically, and the whole is constructed, arranged, and made to operate substantially as herein described.

Second, the combination of the main spindles M, with the cutter holder E, when so constructed and arranged that the article being wrought may be placed by it in every position, and at every angle with the cutter, substantially as herein described.

Third, the combination of the cutter stock with the revolvable and rotating spindle and adjustable rack, as and for the purposes set forth.

Fourth, cutting spirals either regularly or irregularly, varying the direction of the pitch one of the rack, substantially as described.

Fifth, the combination of an adjustable dead centre with the main spindle, in such a manner as that the centre shall remain concentric with the spindle during the whole operation.

No. 36,745.—SAMUEL WOOLSTON, of Vincent Town, N. J.—*Improvement in Marine Camels.*—Patent dated October 21, 1862.—The body of the camel is divided into three longitudinal compartments, by two partitions and the two outer compartments sub-divided by two transverse partitions. Upon one side of the camel is a series of arms constituting a platform upon which the vessel is to rest when fastened to the camel. When in use the inner compartments are filled with air to buoy up the vessel, while the outer ones are filled with water to counteract the weight of the vessel.

Claim.—The above-described improvement in camels, the same being provided with separate water compartments on the opposite sides and arms or a platform B, constructed, arranged, and operated substantially as set forth for the purposes specified.

No. 36,746.—J. R. WILLIAMSON and SAMUEL FORSYTHE, of Seabeck, W. T.—*Improvement in Sawing Machines.*—Patent dated October 21, 1862.—This invention consists in the

arrangement of a hinged roller arm, the rear end of which slides on the eccentric edge of the standard that serves to feed the log toward the saw, in combination with the hook or dog intended to fasten the log at the inner side, and with a hand lever in such a manner that by the action of said hand lever and roller arm, the hook together with the log is drawn up tightly against the face of the standard and held firmly as the sawing proceeds. A triple crank lever is combined with two slotted connexion rods and with the two shells that form the nut for the screw that serves to feed the standard and log towards the saw, in such a manner that the said shells can be thrown in or out of gear with the feed screw, and that the standard can be moved independently of said screw when desired. Secured to the sliding standard is a telescopic tube surrounding the screw in such a manner that an accumulation of sawdust in the screw thread is prevented and a correct action of the two half shells insured. On the slab slide of the log is arranged an adjustable roller for the purpose of keeping the lumber on the log steady, and preventing the same from springing during the operation of sawing.

Claim.—First, the arrangement and combination of the slotted roller arm F, eccentric edge *i* of the standard C, hook *c*, and hand lever E, all constructed and operating substantially in the manner and for the purpose shown and described.

Second, the arrangement of the triple crank lever a and slotted connexion rods *l p*, in combination with the two halves of the nuts *k* or *v*, constructed and operating in the manner and for the purpose specified.

Third, the employment of the telescope tube G, in combination with the screw D, divided nut *k* and standard C, substantially as and for the purpose set forth.

Fourth, the arrangement of the roller J in the adjustable standard H, on the slab side of the log, for the purpose described.

No. 36,747.—W. H. WOOD, of Hudson, N. Y.—*Improvement in Piers and Bridges.*—Patent dated October 21, 1862.—This invention is explained by the claim and engraving.

Claim.—A pier or bridge constructed of hollow cast-iron columns B, fitted on wooden piles A, driven into the bed of the river or stream, filled with concrete or cement C, and supporting by means of braced girders D E, and arched flooring F, covered with sand or cement G, on which a trap rock or other suitable pavement H is laid, substantially as herein set forth.

No. 36,748.—J. R. WILLIAMSON and SAMUEL FORSYTHE, of Seabeck, W. T.—*For Saw Gear.*—Patent dated October 21, 1862.—This invention relates to an improvement in those parts of a saw gear which serve to feed the log toward the saw and to determine the thickness of the board to be cut, the said parts being so arranged that the thickness of the cut can be changed at pleasure, and that the feed can be effected by hand or automatically by the machine itself as may be desired, and that in gigging back, the feeding device can be automatically thrown out of gear or rendered ineffective.

Claim.—First, the arrangement of the adjustable catches *g i* or their equivalents, in combination with the endless chains *b b′*, and standards C C′, constructed and operating substantially as and for the purpose described.

Second, the arrangement of the disk *m*, vibrating brackets *o*, and pawls *p p** in combination with the shaft D and standards C C′, as and for the purpose set forth.

Third, the arrangement of the adjustable inclined plane F, in combination with the friction gear E, constructed and operating substantially as and for the purpose specified.

Fourth, the arrangement of the index *u*, and dial *u′* in combination with the inclined plane F, as and for the purpose described.

Fifth, the additional inclined plane H and hinged roller *r*, in combination with the inclined plane F and friction gear E, constructed and operating substantially as and for the purpose set forth.

No. 36,749.—V. R. BEACH and JUBE DAY, of Independence, Iowa, assignor to Themselves and C. L. PATRICK, of Buchanan county, Iowa.—*Improved Sugar Evaporator.*—Patent dated October 21, 1862.—Extending longitudinally through the evaporator is a partition provided with a proper aperture and gate. In each compartment are arranged cross partitions provided with strainers. Attached to the evaporator under the distributing spout is a cooler made of wire cloth, by which the sirup escapes in small streams and is cooled before entering the receiving cask. The furnace is provided with dampers for directing the heat of the fire under either the cleaning or finishing apartment as may be desired.

Claim.—The construction of a pan with a central partition extending lengthwise, with a gate and strainer therein, for the uses and purposes herein set forth.

Second, the arrangement of cross-partitions with strainers at the bottom, in combination with the central partition, for the uses and purposes as herein set forth.

Third, in combination with the said pan and central partition, the construction of the cooler, for the uses and purposes as herein set forth.

Fourth, in combination with an evaporator so constructed, the arrangement of dampers in the fire furnace, for the uses and purposes as herein set forth.

No. 36,750.—CHARLES BESLEY, of Paris, France, assignor to EDWARD HECKSHER, of the same place.—*Improved Process of Electro-plating Iron, Steel, &c.*—Patent dated October

21, 1862.—This invention consists in a method of galvanizing metals such as cast or wrought iron, steel, &c., by an electro-chemical process in which the covering metal is applied indirectly, *i. e.* by means of an intermediate metal at the ordinary temperature (if above the freezing point) and by using solutions not concentrated.

Claim.—The electro-chemical galvanization of iron, steel, &c., by combining with an intermediate metal applied in the manner herein described, the method of effecting the galvanization proper at ordinary temperature in solutions not concentrated, substantially as herein set forth.

No. 36,751.—JOHN BRIGGS, of Louisville, Ky., assignor to Himself and J. J. HAIR, of the same place.—*Improvement in Tobacco Presses.*—Patent dated October 21, 1862.—The box or main portion of this device is constructed of wood, in the form of a scroll in its transverse section, so as to form a ledge or shoulder through its whole length. Through the centre of the box is a square opening lined with metal plates, and provided with a door.

Attached by means of links to the box is a bifurcated curved metal bar, having an opening in its outer end, through which passes a rod which is hooked at one end, and fitted in a link which passes through the ends of two bars, the object being to compress tobacco plugs or rolls for boxing.

Claim.—First, the box or body A, constructed of spiral or scroll form in its transfer section, so to form a ledge or shoulder *a*, and provided with a door B, in combination with the bar or lever C, screw rod E, and nut G, all arranged as and for the purpose herein set forth.

Second, the manner of applying the lever C, and the screw rod E to the box or body A, to wit, by means of the links or double joints D D, the links F, bars I I, and bands *e e*, as described.

No. 36,752.—WILLIAM COMBE, of New York, N. Y., assignor to N. O. HAWKSHURST, of Queens county, N. Y.—*Improvement in Wooden Sieves for Gas Purifiers.*—Patent dated October 21, 1862.—The grate bars are made broad at the top, and chamferred off on the under side so as to form a wider aperture below between the bars, in order to prevent the lodgment of loose lime, and allow a free passage for the gas.

Claim.—The employment of a wooden grating having the opening made expanding downward to support the lime in dry lime purifiers in gas works, constructed substantially as and for the purposes set forth.

No. 36,753.—J. B. GREELY, of Summit, Iowa, assignor to Himself and B. L. LATHAM, of Dayton, Ohio.—*Improvement in Corn Planters.*—Patent dated October 21, 1862.—The slides are operated by means of trippers hinged to the end of the crank-shaft, and by a stake or pole in the hand of the driver, who places the pole as the machine moves along in a previously made mark, when the pole is struck by one of the trippers, as the machine moves along, causing the seed to be deposited in the ground behind the furrow openers.

The front parts of the frame rest upon the furrow openers, which are provided with points that run under the surface a short distance. The upper edges of the furrow openers form inclined planes so as to throw off any stock or roots taken up by the points. Below the furrow openers are inclined cutters which force down or cut off any roots left in the ground.

The two frames that form the bearing for the covering wheels are connected by cross-bars, the rear one of which rests on spring pads, so that each wheel can rise and fall a certain distance without affecting the other wheels.

Claim.—First, operating the seeding mechanism by means of an independent pole or stake *o*, placed in the ground by the operator in advance of the seeding mechanism at the point where the seed is to be dropped, so that as the machine moves along the seeding mechanism, or some part thereof, will come in contact with the said stake and cause the seed to be instantly dropped at that point, all substantially in the manner herein shown and described.

Second, the combination with the seed slides *h*, of the hinged stake strikers or trippers *n*, rods *i*, crank shaft *j*, and spring *k*, in the manner herein shown and described.

Third, the laterally standing inclined face *e*, projecting point *d*, and inclined cutting edge *f*, on the furrow openers E, as and for the purposes set forth.

Fourth, the combination of the spring pads *b*, with the frames A A', and cross-bars C D, in the manner and for the purpose herein shown and described.

No. 36,754.—C. E. GREEN, of Copenhagen, Denmark, assignor to H. F. HAMMER, of Boston, Mass.—*Improvement in Watch Chain Guards or Keys.*—Patent dated October 21, 1862.—This device consists of a key head and socket, in which is placed a plunger or clearer, which, when the key pipe is entirely within its socket tube, will so close the mouth of the key as to prevent any dirt from entering therein. By pressing back the socket tube into the key head the pipe will project so as to receive the head of the winding arbor of a watch.

Claim.—The combination of the clearer *a*, the key C, the slider B, and the socket tube A, the whole being arranged substantially in the manner and so as to operate as described.

No. 36,755.—G. L. WITSIL, of Philadelphia, Pa., assignor to Himself and W. L. WATTIS, of the same place.—*Improvement in Coal Oil Lamps.*—Patent dated October 21, 1862.—The

burner is formed of two flat tapering air flues arranged so as to be inclined toward each other at their upper ends, and afford a large tapering wick chamber between them, in combination with two deflectors curving over the upper ends of the air flues respectively, and extending laterally beyond them on each side.

Claim.—The two distinct tapering air flues A A, in combination with the two deflectors *a' a'* and the spacious wick chamber B, the same being constructed and arranged, in relation to each other and the cap C, substantially in the manner described and set forth for the purposes specified.

No. 36,756.—GEORGE WOODS, of Boston, Mass., assignor to MASON & HAMLIN, of the same place.—*Improvement in Operating Swells in Musical Instruments.*—Patent dated October 21, 1862.—Attached to the bellows or receiver is an arm, which is so arranged as to act at the will of the performer upon the roller or lever, which, in turn, acts upon the swell or swells of the instrument, the action being effected by the exhaustion of the air from the bellows or receiver, which is governed by the performer through the pedals of the instrument, thereby obviating the necessity of removing the foot from the pedal to a side or independent pedal.

Claim.—The operating of the swell or swells of melodeons, harmoniconS, or other similar instruments, by the contraction and expansion of the bellows or any elastic receiver connected with the instrument.

No. 36,757.—JOSEPH FLINT, of Rochester, N. Y.—*Improvement in Plastering Trowels.*—Patent dated October 21, 1862.—To the back of the plate is riveted, longitudinally, a slender piece of metal, diminishing toward either end, which acts as a stiffener to the plate. From the largest portion of this piece, a little forward of the centre, arises the standard, at the top of which is the shank passing through the wooden handle. Transversely of the implement the standard is expanded into the form of a disk midway between the shank and plate.

Claim.—Forming the standard for attaching the handles of trowels with the transverse expansion D, substantially as and for the purpose herein set forth.

No. 36,758.—N. W. NORTHRUP, of Greene, N. Y.—*Improved Car Coupling.*—Patent dated October 21, 1862.—This invention consists of a series of devices named in the claim, and forming a stationary, self-adjusting shackle bar, attached to one of the cars, and a square, funnel-mouthed chamber, spring latch, and disconnecting rod attached to the other, by which the cars will be readily and automatically coupled when brought in contact with each other.

Claim.—The compound union adjustable shackle bar *h*, side springs *j j*, slide bar *g*, the springs *v v*, and bracket *z*, the slit *t* in shackle bar, the slits *b c* in the chamber A, the horizontal latch B, spring *f*, rods *p*, rocker *m*, vertical bolt *y*, shoulder rests *b c*, all in combination with the rubber spring, bumper D, in the manner hereinbefore stated and for the purposes herein set forth.

No. 36,759.—T. C. ANDREWS and J. SHINN, of Leverington, Pa., assignor to T. CECIL ANDREWS, of the same place.—*For Engraved Plate Printing Press.*—Patent dated October 21, 1862.—This invention relates to improvements in presses used for plate printing, by means of which the pressing and inking can be done by steam or other power, whilst the wiping or polishing is to be done by hand. The invention does not admit of a brief description.

Claim.—First, arresting the motion of the plank B' for a certain time, whilst the motive power continues in action, so as to admit of wiping and polishing the plate B by manual labor.

Second, the combination of the endless rails C C and the endless chains *c c* with the jaws or clamps *a a'* attached thereto, in the manner and for the purpose above described.

Third, the combination of the switches *s s* with the endless rails C C, constructed and arranged substantially as set forth.

Fourth, the combination of the plank B', to which the engraved plate B is secured, with the jaws or clamps *a a'*, constructed and operating substantially as described.

Fifth, operating the pin 1 by the lever *b*, switches *s s*, and jaws *a a'*, as or at the time the latter are closed by the switches *s s*, as set forth.

Sixth, the combination of the conical or V-shaped slots in pins 1 and 2, and the wedge-shaped pins or lugs 3 and 4, with the plank B', as described, to secure the latter accurately in position.

Seventh, the combination of the conical or V-shaped slots 5 and 6 in the plank B' with the wedge-shaped pins or teeth *e e* in the jaws *a a'*, for the purpose set forth.

Eighth, the scraper M, in combination with engraved plates, arranged and operating as shown, for the purpose set forth.

No. 36,760.—ETHAN ALLEN, of Worcester, Mass.—*Improvement in Back Sight for Rifles.*—Patent dated October 28, 1862.—This invention consists in so arranging a series of holes in a revolving disk between two plates of metal, with a vertical slot cut through each, that, as the disk is turned from one notch in the periphery to the next, a new hole appears in the slot a little higher or lower than the last, according to the direction in which the disk is revolved.

Claim.—Plate A and disk B, constructed substantially as described and for the purpose set forth

No. 36,761.—CHARLES H. AMIDON, of Greenfield, Mass.—*Improvement in Clothes-wringing Machines.*—Patent dated October 28, 1862.—In this device the cam, block, and spring are so arranged in connexion with the shaft and with a rising and falling cross-bar that conveys the pressure to the wringing roll, that the latter will yield freely at either end without undue pressure at the other end.

Claim.—In combination with a turning shaft G, that serves as a shaft and brace both, and the rising and falling cross-bar E, the arrangement of the cam *h*, block *f*, and spring *e*, intermediately placed on said shaft and cross-bar for the purpose of making pressure on the upper roll D, and allowing said roll to rise at either end, without producing undue pressure at the other end, in the manner and for the purpose herein set forth and explained.

No. 36,762.—C. M. ATKINS, of Pottsville, Pa.—*Improvement in the Construction of Railroad Cars.*—Patent dated October 28, 1862.—In the angles of the frame of the car are placed metal brackets, through which and the timbers and an external bracket are passed bolts for the purpose of securing the parts more firmly together and preventing the sides from springing out.

Claim.—The cast-iron brackets D, when applied to the inner surfaces of the angles or corners of the car bed or frame, and used in connexion with the external straps or brackets C and bolts *a*, for the purpose herein set forth.

No. 36,763.—GEORGE BAILEY, of Buffalo, N. Y.—*Improvement in Presses for Stamping Tickets, &c.*—Patent dated October 28, 1862.—In this device the inking ribbon, at each impression, is slightly moved along by the motion imparted to one of the drums. When the ribbon is transferred entirely from one drum to the other, the motion of the drums is reversed by means of a ratchet wheel placed in each drum, in connexion with two pawls affixed to the opposite ends of a vibrating plate, so that when one pawl is engaged the opposite one will be disengaged, and by the shifting of these pawls from one ratchet wheel to the other the inking ribbon is made to travel back and forth. In combination with the stamp press and inking ribbon is a set of type wheels for the purpose of indicating numbers or dates.

Claim.—First, the combination with the inking ribbon and pawls of two shifting levers, or other equivalent devices, so arranged in respect to the plate or arm to which said pawls are attached as to effect the shifting or reversing of the direction of travel of the inking ribbon, in the manner substantially as described herein.

Second, in combination with the stamp press and inking ribbon, a set of numbering or dating type wheels, arranged and operating substantially in the manner set forth.

No. 36,764.—A. C. BOUK, of Clinton, Iowa.—*Improved Mode of Rafting Logs and Timber.*—Patent dated October 28, 1862.—This invention consists in connecting the several logs or pieces of timber together so as to form a raft by means of long timbers chained together at the ends, in the shape of a parallelogram, thus forming a boom, which encloses the logs or timbers to be rafted, the object being to prevent the loss or damage to logs caused by boring holes as in the usual mode of rafting.

Claim.—The application of booms to rafting logs and timber in any waters, so as to save the timber rafted from loss, either by boring every log or by obstructions like bars and snags, thus securing the timber rafted, and transporting the same without diminishing either quality or quantity.

No. 36,765.—L. D. BUNN, of Morristown, N. J.—*Improvement in Corpse Preservers.*—Patent dated October 28, 1862.—This invention consists in the arrangement of a moving cooling board fitted into the body chamber with an air-tight joint, in combination with an ice box and cold-air chamber, forming the top or cover of the said body chamber, in such a manner that the body or corpse, laid upon the cooling board and introduced into the body chamber, is exposed to the cooling influence of the ice without coming in contact with the moisture or water formed by the melting ice, and at the same time convenient access may be had to the corpse if desired, the object being to arrest or check the decomposition of a body for several days from the time of death.

Claim.—The arrangement of the cooling board C with head-piece *a*, in combination with the body chamber A, ice-box D, and air chamber E, all constructed and operating substantially in the manner and for the purpose shown and described.

No. 36,766.—G. W. BUSS, of Boston, Mass.—*Improvement in Wagons.*—Patent dated October 28, 1862.—This invention consists in combining a spring of any proper material with a series of levers or arms in such a manner that the spring will be acted upon near to the fulcra thereof, and that the elastic force of the sustaining device can be readily adapted to the degree of compressibility required, so that one and the same vehicle can be adapted to the carrying of greatly varying loads.

Claim.—First, supporting the wagon by means of the lever or levers and spring or springs, arranged with regard to each other and to the axle, substantially as described, so that the spring or springs shall be acted upon at such a point of the lever as receives, comparatively, the shortest play or motion, as set forth.

Second, in combination with the lever or levers, the cross-bar *l l* or *r r*, as described, and for the purpose specified.

Third, in combination with the lever or levers *i i* and axle *c c* the radial arms *f f*, the whole operating together as set forth.

No. 36,767.—D. M. CUMMINGS, of Enfield, N. H.—*Improvement in Adjustable Hames.*—Patent dated October 28, 1862.—This invention consists in constructing the face plate with indentations on both sides, and the clasp, with projections on the inside, and connecting the clasp with the terret in such a manner that the hames can be readily adjusted to collars of different sizes, the clasp being moved up or down upon the indentations and kept in place by a strap.

Claim.—First, the combination of the clasp D and its projections *b b* with the face plate E and its indentations *a a a a*, constructed and operating as above set forth.

Second, the combination of the terret C with the clasp D, as above described.

Third, the combination of the face plate L with the clasp D and the terret C, constructed and operating as above set forth.

No. 36,768.—J. C. DAY, of Jersey City, N. J.—*Improved Hammock Cot.*—Patent dated October 28, 1862.—This invention consists of a canvas hammock, having its edges turned and bound over a rope, by which latter it is supported upon four posts at the corners.

Claim.—The portable army hammock cot, constructed and arranged substantially as described and shown.

No. 36,769.—DAVID DICK, of Meadville, Pa.—*Improvement in Apparatus for Mineral Oils as Fuel.*—Patent dated October 28, 1862.—The nature and object of this invention will be understood from the claim and engraving.

Claim.—First, the employment in a mineral oil furnace of pumice stone or other equivalent porous incombustible material, through which the oil flows, and upon the surface of which it is burned, substantially in the manner described for the purposes set forth.

Second, the combination of a furnace in which mineral oils are employed as fuel, with a water space surrounding the same, substantially in the manner described for the purpose of preventing the overheating of the furnace, and the consequent generation of gas in the fire-box as set forth.

Third, the combination in a mineral oil furnace of a water chamber, a fire-box, and a series of air flues, substantially in the manner and for the purposes described.

Fourth, the combination of an extinguisher plate with a fire-box and air tubes, substantially as and for the purpose specified.

Fifth, perforating the extinguisher plate as described, for the purpose of permitting the escape of the gas, and preventing the entrance of air, as set forth.

No. 36,770.—JOHN DICKINSON, of New York, N. Y.—*Improvement in Apparatus for Dressing Millstones.*—Patent dated October 28, 1862.—This invention consists in a method of graduating the motion of a parallel rule by means of a compensating extension arm or lever and a fixed arm or lever, crossing each other and secured at their ends to the rule and a bed board, so that by means of a connexion with a scroll wheel, having ratchet teeth on its edge, operated by a lever and a pawl, each degree or tooth of the wheel, as the latter rotates, will move the rule a corresponding equal distance on the face of the millstone.

The degrees of motion in the parallel rule are regulated by means of a scale of distances and an adjustable detent pin.

The motion of the diamond holder is steadied in the parallel rule by means of a raised ledge on the upper side of the double guide way or rule, so as to form a straight edge against which the back of the diamond holder bears.

Secured to the under side of the double guide way is an adjustable shield, composed of thin slips of steel, so as to rest on the face of the millstone, and thus protect the setting of the diamond, but allowing its point to project below them far enough to cut the stone.

Claim.—The combination of the scroll cam wheel I, the arm or lever C, compensating arm D, operating lever U, and pawls P and Q, for operating the scroll cam wheel, or equivalents of either of the said several parts, in combination with the said scroll cam wheel, to produce the results hereinbefore set forth.

Second, the combination of the graduated scale *a2* and adjustable stop *b2* with the lever U and scroll cam wheel I, for the purposes hereinbefore set forth.

Third, the use of the raised ledge *c2* on the upper side of a double guide way parallel rule, for the purposes hereinbefore set forth.

Fourth, the use of the two strips of steel *f2* as a shield for the setting of the diamond in dressing millstones, in combination with the guide way *d2'*, substantially as hereinbefore set forth.

Fifth, the use of the two ledges *g2 g2*, raised on the lower surface of the double guide way, so as to form a channel for the shields *f2* to be adjusted in, in combination with the shields *f2* for the purposes hereinbefore set forth.

No. 36,771.—AMBLER EDSON, of Cambridge, Ill.—*Improved Washing Machine.*—Patent

geared wheel X', and set screw U, the same being attached to and used in combination with

No. 36,771.—AMBLER EDSON, of Cambridge, Ill.—*Improved Washing Machine.*—Patent dated October 28, 1862.—Projecting downward into the tub and secured to arms on a shaft are a series of pins, which rest upon the clothes. A reciprocating motion is imparted to the shaft which carries the pins, by means of a pinion and cogged segment.

The lid is fastened to the tub by forcing slides on the lid into handles, or ears attached to the tub.

Claim.—The slides C C, the handles D D, the pivoted arms R R, the lever O, the stirrer F F G G H and I, in combination with the bevelled pinion K, and the bevelled segment L, as represented and for the purpose specified.

No. 36,772.—LEONARD EGGLESTON, of Battle Creek, Mich.—*Improved Mode of Filling Bags with Grain.*—Patent dated October 28, 1862.—To the upper part of a standard is secured a hopper by means of a clasp, so as to allow the hopper to move up and down the standard. It is held in any desired position by means of an eccentric stop-piece passing in a slot in the standard. A bag may be attached to the hopper for the reception of the grain.

Claim.—The combination of a movable hopper with the manner of holding it in the required position, and the manner of attaching the bag to the hopper, substantially as set forth.

No. 36,773.—A. H. EMERY, of New York, N. Y.—*Improvement in Projectiles for Rifled Ordnance.*—Patent dated October 28, 1862.—This invention consists in providing sub-calibre projectiles, having flat heads or a form approximating thereto, with a soft metallic point of such form as to tend to reduce the atmospheric resistance to the passage of the projectile, and of such density as to cause the centre of gravity of the projectile to be in front of the centre of volume. The projectile is provided with a compound metallic sabot, which is designed to hold the centre of the rear of the shot in the axis of the bore, while it transmits to the projectile the entire pressure on the section of the bore, shuts off the windage, and rifles the projectiles in rifled guns.

Claim.—First, the construction and use of a soft metallic point arranged with a sub-calibre projectile, substantially as and for the purpose herein described and set forth.

Second, the construction and use of the compound metallic sabot, arranged with a sub-calibre projectile, substantially as and for the purposes herein described and set forth.

No. 36,774.—JOSIAH EVELAND, of Elizabeth City, N. J.—*Improved Mode of Connecting Fellies of Wheels.*—Patent dated October 28, 1862.—The adjoining ends of two fellies are fitted and secured in metal sockets, provided respectively with a dovetail tenon and recess. The tenon is dovetailed both longitudinally and transversely, so as to prevent the sockets from being drawn apart or depressed, or forced inward.

Claim.—Having the sockets C C′ provided respectively with a tapering dovetail tenon and a tapering dovetail recess, fitting and operating together in the manner herein shown and described, so as to form a firm but easily separable connexion between the ends of the fellies and prevent all lateral and inward spreading or bending of the felly ends, as set forth.

No. 36,775.—GEORGE B. and C. B. GARLINGHOUSE, of Allonsville, Ind.—*Improvement in Harvesters.*—Patent dated October 28, 1862.—Projecting opposite each other from the fly-wheel and crank, respectively, are two conical or conoidal pintles or gudgeons, which occupy sockets or countersinks on opposite sides of a pitman near its rear end. The outer end of this pitman consists of two branches, armed on their opposing sides with other and similar conical or conoidal gudgeons, and which occupy sockets in the heel of the cutter bar. The latter named gudgeons are brought to their bearings by means of a screw-bolt and nut, and the former by one or more screws. An outward spring being given to the branches of the pitman, causes them to press firmly against the nut and bolt head, and prevents their shaking loose by the violent agitation of the bar.

Claim.—First, the conical or conoidal coupling hinge K K′ L L, and set screws F F′, arranged and adapted to the cutting apparatus of a harvester, in the manner and for the purposes set forth.

Second, the branched pitman *m m′*, having conical or conoidal gudgeons K″ K‴, adjustable in the line of their common axis, within corresponding sockets in the cutter bar by means of a screw N, or its equivalent, substantially as set forth.

No. 36,776.—J. T. GILMORE, of Barton, Ohio.—*Improvement in Machinery for Training, Staffing, and Fine-Dressing of Millstones.*—Patent dated October 28, 1862.—The object of this invention is to embody in one and the same machine an arrangement of parts by which the various operations of training, staffing, and fine cracking and laying out the principal and subordinate furrow on the surface of millstones, the parts being capable of easy and ready adjustment, so as to insure the certainty of the various operations named.

Claim.—First, specifically, the employment of the arm S, with its dovetailed guide T, and the socket slide and set screws *e f* and *g*, constructed and operating as and for the purpose set forth.

Second, in combination with the said arm the shaft W, with its crank plate Y, bevelled-

geared wheel X′, and set screw U, the same being attached to and used in combination with the other parts of the machine, to wit, the slide K, cross-plate G, dovetailed guide H, screw shaft I, nut O, bevelled-geared wheel N, and crank plate R; said several parts connecting with the circular pivot plate F, clips *c* and *c′*, sleeve D, double flange E, hollow journal A, branch feet B, set screws *c″*, cap plate *a*, screw bolts *b*, and lever nut *y*, the whole constructed and operating as described and for the purpose specified.

Third, the mode described for attaching the machine to the bed and runner stones by means of the branched straps and grappling arms, secured as described, for the purpose set forth.

Fourth, the employment of the small training and staffing block *i*, with its shaft fitting into the socket slide *e*, and adjusted and secured by the screws *f* and *g*, as described, and operating in combination with the horizontal movement of the arm *s*, for the purpose specified.

Fifth, the peculiar arrangement for using and controlling the diamond, in combination with the said arm S, the parts constituting said arrangement being formed of the stock *j*, diamond handle *i*, pivoted to said stock at *m*, spring *n*, hooked finger *o*, lever *p*, and handle *r*, constructed and operating as set forth and for the purpose specified.

Sixth, attaching the arm S, with its dovetailed guide T, socket slide *e*, and screws *f* and *g*, to the circular plate F, said plate having a shoulder *t*, as shown in Fig. 9, and using the same in combination with the sleeve D and hollow journal A, as described and for the purpose stated.

No. 36,777.—BENJAMIN GONZALES, of Goodland, Ind.—*Improved Chest and Table for Bread-Making.*—Patent dated October 28, 1862.—This invention consists in an arrangement of chests for holding meal and flour, and of other depositories or compartments, in connexion with a moulding board for the purpose of facilitating the operation of bread, cake, and pastry making.

Claim.—The combination and arrangement of the several parts, comprised in the method of opening and closing the flour chest E, by lowering and raising the molding board A, the relation of the flour chest E, by lowering and raising the moulding board A, the relation of the flour chest E, meal chests B, and moulding board A, the relation of the side depositions *r v*, &c., to the flour chest E, meal chest B, and moulding board A, and the mode of attachment of meal chest B to flour chest E, in the manner and for the purposes described.

No. 36,778.—B. F. GOSSIN, of Cincinnati, Ohio.—*Improvement in Machines for Making Joint Fastenings for Railroad Rails.*—Patent dated October 28, 1862.—This machine designed for shaping thick plates of wrought-iron into a crimped form adapted to fit and embrace the side of a railroad rail, and the invention consists mainly in an arrangement of two or more convex swages or dies adapted to approach each other simultaneously, and a convex counter die, so as to crimp without dragging or straining the metal.

Claim.—First, the arrangement of stationary bed and hardy C D, clamping gauge L M, and simultaneously conveying dies E E′, or devices substantially equivalent, the whole being combined and operating together, as set forth.

Second, the yielding supports K, for the temporary support of the blank, in the manner set forth.

No. 36,779.—SERRE HOWARD, of Elyria, Ohio.—*Improvement in Breech-loading Fire-arms.*—Patent dated October 28, 1862.—This invention will be understood by reference to the claim and engraving.

Claim.—First, combining the barrel and the stock of an improved fire-arm with each other through the medium of the hollow breech piece B, which has an oblong opening in the side thereof for the temporary reception of a metallic cartridge; but this is only claimed when the said cartridge is driven forward into the chamber of the barrel of the fire-arm, and is then provided with an unyielding recoil block by means of the tubular piston E, and the levers F and G, which are combined with each other and with the hollow breech-piece D, substantially in the manner herein set forth.

Second, opening and closing the lateral aperture in the breech piece of my improved breech-loader by means of the tubular piston E, which fits accurately within the bore of the main compartment of said breech piece, and is operated therein in a longitudinal direction, substantially in the manner herein set forth.

Third, operating the tubular piston E by means of the levers F and G, in connexion with the slot in the under side of the tubular portion of the breech piece B, substantially in the manner herein set forth.

Fourth, the arrangement of the trigger *c*, the bridle *d*, the sear *e*, and the sear spring *i* with each other, and with the hammer rod H, the main spring *b*, the tubular piston E, and the levers F and G, substantially in the manner and for the purpose herein set forth.

Fifth, the arrangement of the set trigger *g* and the sliding pin *y*, with the sear *e* and the lever F, substantially in the manner and for the purpose herein set forth.

Sixth, combining the barrel C with the breech-pin B, by slipping a portion of the butt of the former within the mouth of the latter, and then securing said connexion by means of the ears *x* and *w*, the hinged loop *h* and the set screw *m*, in the manner herein represented and described.

Seventh, combining toothed and movable valve plug *g*, with the head O of the tubular

Seventh, combining toothed and movable valve plug *g*, with the head O of the tubular piston E, and with the valve seat within the same, in such a manner that a slight degree of inward pressure upon said valve plug will produce a perfectly tight joint at that end of the said tubular piston, substantially as herein set forth.

No. 36,780.—J. M. GROSH, of Shaefferston, Pa.—*Improvement in Harvesters.*—Patent dated October 28, 1862.—This invention consists in the employment of a jointed automatically acting rake handle or arm, in combination with a slotted shaft, cam, pintle, spring and stationary discharge adjusters in connexion with the harvester, and operates simultaneously with the cutting of the grain by gearing driven from the main driving wheel.

The compressing and bundling claws are so constructed as to admit of ready access of the fingers between the shafts and the bundle of grain, for the purpose of facilitating the passage of binding straws, cords, or wires around the bundle.

One series of the claws is attached to a revolving or turning disk, and to a spring, the said disk being combined with the shaft of the jointed rake arm.

Claim.—First, the jointed sliding rake arm, applied and operating substantially as and for the purpose described.

Second, widening the claws of the binding device between their axis and their inner curved edge, substantially as and for the purpose described.

Third, the arrangement of means specified for opening and closing the claws alternately, as set forth.

No. 36,781.—THOMAS HUNTER, of New York, N. Y.—*Improvement in Portable Shields for Riflemen.*—Patent dated October 28, 1862.—This device consists of a shot-proof armature or shield, which is capable of being carried from place to place, and readily put up in any desired spot, so as to protect one or more riflemen, and afford a convenient rest for their rifles while taking aim. The said armature is constructed so as to be readily folded up for transportation and be converted into a bedstead or table, as occasion may require.

Claim.—The portable folding armature S, made of three or more shot-proof sections A, B, C, connected by hinges *a*, *b*, substantially as described, so that the same can be used as an armature table or bedstead, in the manner specified.

Also, the application of the rest F, in combination with the section C of the armature S, as and for the purpose set forth.

No. 36,782.—DANIEL HUSSEY, of Nashua, N. H.—*Improvement in Bobbins.*—Patent dated October 28, 1862.—This invention consists in the employment of a double-coned bobbin or spool, each of the end parts being of greater diameter than the body, and in winding or laying the roving or yarn thereon by increasing the width of each successive layer of the roving or yarn until the cones and the body, or the part of the bobbin uniting them, shall be completely covered, and subsequently diminishing the width of each succeeding layer of such yarn or roving until the requisite amount thereof shall have been wound on the bobbin.

Claim.—The double-coned bobbin or spool, made as described, and the formation of the mass of roving thereon, in the improved manner substantially as specified.

No. 36,783.—LYMAN HUTCHINS, of Norwich, Conn.—*Improved Camp Bed.*—Patent dated October 28, 1862.—This device consists of a folding frame provided with a pillow frame hung on a rod, and with legs so constructed and arranged as to admit of its being readily unfolded and used as a settee or bed.

Claim.—The folding frame *a*, in combination with the pillow *n*, rod *h*, and legs *d g j*, arranged substantially in the manner and for the purpose described.

No. 36,784.—J. H. JONES, of Dayton, Ohio.—*Improvement in Separator and Smut Machines.*—Patent dated October 28, 1862.—In this machine the grain is secured by passing it through a spiral scouring surface on the inner side of the cylinder.

The blades of the beater are set obliquely, so as to throw the grain against the screw groove, and also to produce an upward current in connexion with wings on the bottom of the beater and a fan.

The frame of the screening apparatus is made in one piece and possesses the properties of a spring, being attached by means of clamp buttons to the sides of the frame so as to spring backward and forward.

Claim.—First, a scouring cylinder, which answers as a concave for a smut or grain-clearing machine, whose inner circumference is dressed with a screw or spiral scouring surface, substantially as and for the purpose set forth.

Second, the combination with such screw or spiral scouring surface, of a beater C C, whose blades J J and wings *d d* are arranged and operate in the manner and for the purpose substantially as described.

Third, the sieve and frame J J′, so constructed and arranged on a smut or grain-cleaning machine that the frame supports and acts as springs to the sieve, substantially in the manner and for the purpose described.

Fourth, the combination of the screw concave, the beater, the trunks M L, suction spout H H, fan D I, sieve J J′, and shaft B E F, the whole constructed, arranged, and operating substantially as described.

No. 36,785.—W. H. JORDAN, of Roseville, Ind.—*Improvement in Cultivators.*—Patent dated October 28, 1862.—The ploughs are attached to bars, one of which latter is placed on the axle and the other connected with the frame, and to the bars is attached a lever, by means of which the driver is enabled to raise and adjust the ploughs to the proper depth.

Connected with the main axle is a laterally sliding frame which is moved by a lever under the control of the driver, so that the machine may be made to conform to the irregularities of the rows of the plants.

Claim.—The ploughs J′, when arranged so as to be simultaneously raised and lowered by the turning of the bars I G, connected by a rod or bar J, as shown, in connexion with the laterally adjustable frame A, connected with the axle E, and all arranged as and for the purpose set forth.

No. 36,786.—JOHN LAUGHLIN, of Gettysburg, Pa.—*Improvement in Mode of Attaching and Detaching Whiffletrees.*—Patent dated October 28, 1862.—To the under side of the whiffletree are secured two spring bolts, the outer ends of the springs being loose while the bolts secured to them near their outer ends pass into openings for their reception in ferrules at the ends of the whiffletree. To the under side of the whiffletree are also attached boxes I I, in which are the fulcra of the two levers, provided with journals which fit in openings in the sides of the boxes. One end of each lever passes into an ear on the end of the spring bolts, the inner ends of the said levers being operated upon by means of straps G attached to them. These straps are connected by a bar or rod H, to the centre of which bar is secured a strap which passes up over the dash board of the vehicle and serves to operate the levers.

Claim.—The arrangement of the spring bolts E E, the bent levers F F, the boxes I I, the straps G G J, and the bar H, constructed and operating in the manner and for the purpose herein specified.

No. 36,787.—JOHN LEES, of Racine, Wis.—*Improvement in Churns.*—Patent dated October 28, 1862.—The dashers are attached to arms connected with a series of levers so arranged and operated by the revolution of a wheel or crank as to cause the dashers to approach and recede from each other in the box.

Claim.—The construction and arrangement of the dashers No. 2 No. 2, connecting rods No. 3 No. 3, attached to driving wheel No. 1, the whole constructed and operating substantially as hereinbefore set forth.

No. 36,788.—C. MCGINNISS, of Chicago, Ill.—*Improvement in Smut and Separator Machines.*—Patent dated October 28, 1862.—For a description of this invention reference must be had to the specification and drawings.

Claim.—First, in combination with the surrounding perforated internally ribbed cylinder G *g g′*, the angularly corrugated scourer G *g′ m m′ n o p*, the whole constructed and operating substantially in the manner and for the purpose specified.

Second, arming the scourer G′ and the vertical ribs *g*, and upper head of the cylinder G, with oval form projections *g′*, as described.

Third, providing for the uniform distribution of the grain in its passage from the shoe U to the shoe V, by means of inclined distributing channels or their equivalents, on the bottom of the shoe U, substantially as described.

Fourth, the combination of the slotted adjusting rods *w w* and hinges *x x*, substantially as and for the purpose described.

Fifth, the combination of the screening shoes U and V with the slotted adjusting rods *w w*, and hinges *x x*, the whole arranged and operating substantially in the manner and for the purpose described.

No. 36,789.—JOHN PLATT and WILLIAM RICHARDSON, of Oldham, England.—*Improvement in Cotton Gins.*—Patent dated October 28, 1862.—This invention relates to that description of gin known as "McCarthy's," in which one roller is employed in conjunction with a fixed and vibrating blade, and it consists in the employment of two of such vibrating blades acting alternately upon the usual roller and fixed blades and in the adaptation of apparatus whereby the material is regularly supplied to the roller and blades, and is presented thereto in a more open and suitable condition for the separation of the seed.

Upon the roller *a* is a crank pin *o* connected to a block *p*, to which are adapted two rods *q*, encircled by springs which abut against a second block *s* through which the rods *q* pass and in which they are capable of sliding. The block *s* is connected by a centre pin to a lever fixed upon a shaft *u*, by which the latter is caused to vibrate in its bearings. To the shaft *u* is attached a series of combs *v* extending across the machine, which combs in vibrating with the shaft *u* pass through a series of stationary combs, and thence through the teeth of a spiked roller.

Claim.—First, the two alternately reciprocating blades *c h*, constructed and arranged to operate in combination with each other and with the roller *a* and breast *b* of the McCar thy cotton gin, in the manner and for the purposes herein shown and explained.

Second, the employment or use of combing or carding instruments, substantially as herein described for opening the material preparatory to its presentation to the ginning mechanism *a b c*.

Third, the transferring comb *s v* constructed as described, and employed to present the material in tufts to the ginning mechanism *a b c*, substantially as and for the purposes set forth.

Fourth, the elastic or yielding connecting rod *o p q* employed to operate the comb *u v*, substantially in the manner described.

No. 36,790.—N. W. NORTHRUP, of Greene, N. Y.—*Improvement in Combined Car-Wheel and Car-Axles.*—Patent dated October 28, 1862.—One wheel is firmly secured to the axle and turns with it, the other revolves loosely upon the axle. The follower or nut D is made in two parts so as to allow it to tighten on the axle and is screwed into the inner side of the wheel. Into the screw joint of the wheel and follower is inserted a set screw to prevent the follower from being moved from its place.

Claim.—The divided follower D, set screw C, on axles B, in combination with the tight wheel E, in the manner and for the purpose hereinbefore set forth.

No. 36,791.—GLENDY MOODY, of Falmouth, Maine.—*Improvement in Machines for Spreading and Turning Hay.*—Patent dated October 28, 1862.—This invention consists in the combination with a carriage provided with a suitable actuating mechanism, of a series of independent reciprocating forks which receive a united reciprocating motion from a series of cranks.

The upper cross-bar N is clamped to the upright standard of the carriage by means of loops and slots which allow the forks to be adjusted to the right or left, and higher or lower as occasion may require. The handles of the forks pass through eyes attached to the upper cross-bar, which eyes are allowed to turn or swivel to accommodate the movements of the forks.

Claim.—First, a reciprocating bar M with forks L pivoted to it, and operated by means of cranks, or other equivalent eccentric movement, substantially as and for the purposes set forth.

Second, the combination of a carriage A with suitable actuating gearing and a series of independently reciprocating forks L, which receive a united reciprocating motion from a series of cranks or equivalent eccentric means, substantially as and for the purposes set forth.

Third, the cross-bar N with its slots *j* and loops *i*, or equivalent means, in combination with the uprights *g g*, for the purpose of adjusting the forks, substantially as described.

Fourth, the swivelling eyes *f*, in combination with the bar N and pivoted forks E, substantially as and for the purpose set forth.

No. 36,792.—G. A. POPPY and C. H. COLEGROVE, of Rochester, N. Y.—*Improvement in Water Elevators.*—Patent dated October 28, 1862.—The crank end of the shaft is provided with a ratchet wheel having a balance pawl to prevent the wheel from running backwards. On the other end of the shaft is a compound clutch and lever which embraces the shaft and hub of the pulley. The clutch is moved back and forth upon the shaft by means of a lever, one end of which is attached to the cart, while the other end projects in front of the shaft.

Claim.—The compound clutch and brake G, in combination with the spring lever L, weighted pawl F′, and pulley C, when these parts are constructed, arranged and operated as and for the purpose herein set forth.

No. 36,793.—N. B. POWERS, of Lansingburg, N. Y.—*Improved Composition for Sizing for Use in the Manufacture of Floor Cloths, &c.*—Patent dated October 28, 1862.—The ingredients of which this compound consists are blood and tannin, with or without linseed or other oils, to be applied to textile fabrics, such as canvas, used in the manufacture of oil-cloths, or other textile fabric or paper.

Claim.—The employment or use of a sizing compound made of the within described ingredients, mixed together in about the proportions specified.

No. 36,794.—N. B. POWERS, of Lansingburg, N. Y.—*Improved Composition for Sizing and Steeping Floor Cloths, &c.*—Patent dated October 28, 1862.—This invention consists in the employment, as a sizing compound, of a composition made of blood and lime, with or without linseed or other drying oils, to be applied to canvass used in the manufacture of floor oil-cloths, &c.

Claim.—The employment or use of a sizing compound made of the ingredients herein specified, and mixed together in about the proportions set forth.

No. 36,795.—JOHN PRICE and WILLIAM LEWIS, of Danville, Pa.—*Improvement in Piles for Railroad Rails.*—Patent dated October 28, 1862.—The top which forms the outer surface of the head of the rail is made with flanges projecting downward on each side of the layer or layers directly beneath it, leaving a recess between the points of the projecting flanges and the layer below them, of near the thickness of a layer, so that when rolled into a T rail the flanges of the upper layer will embrace the entire head of the rail and thus prevent the same from stripping or scaling off.

Claim.—The employment of the flanged layer *i* on top, or on top and bottom of the pile A, when the same is used in combination with the layers *h g f*, and arranged so as to form recesses *k* between the points of its flanges and the next adjoining layer *f*, as and for the purpose shown and described.

No. 36,796.—M. B. RIGGS, of New York, N. Y.—*Improvement in Guard Fingers for Harvesters.*—Patent dated October 28, 1862.—Upon the upper side of the finger is a seat for the cutter bar, immediately below which is a cavity E, the bottom of which latter forms a seat to which the stationary cutter is secured. The stationary cutter is formed of plate steel, the shank of the blade being narrower than its body, and is bent downward to fit the bottom of the cavity when it is secured by means of a screw or rivet.

Claim.—First, the construction of the finger with a cavity E, so arranged as to permit the fastening of the stationary cutter J, as described; and also, so as to secure nearly equal thickness to the walls, sides, and parts of the finger throughout, as and for the purpose hereinbefore described.

Second, fastening the blade J beneath the cutter bar, in the manner set forth and for the purposes specified.

No. 36,797.—J. B. ROACH, of Elizabethport, N. J.—*Improvement in Slide Valves of Steam Engines.*—Patent dated October 28, 1862.—The valve is composed of two pieces B C, the piece B working upon the seat *a a*, and containing the usual exhaust cavity. The piece C is arranged between B and the back of the valve chest, and is made with its two faces parallel therewith in a direction lengthwise of the valve, but inclined to each other in a transverse direction, so as to prevent any steam from getting between it and the surface inside the back or cover of the chest, and also operating as a wedge between the piece B and the said surface, thereby adjusting the said piece to the seat *a a*, and while confining it to the seat protects its back from steam pressure. The pieces B and C are provided with lugs and screws, by which the valves may be adjusted without removing the cover from the steam chest.

Claim.—The combination of the two inclined pieces B C and adjustable screws *j g* with each other, and with the valve seat *a a* and back *b b*, in the manner herein shown and described.

No. 36,798.—GREGORY ROTH, of Cincinnati, Ohio.—*Improvement in Candle-Moulding Machines.*—Patent dated October 28, 1862.—This device consists of a rack frame containing three horizontal stationary rack plates and a movable rack plate or slide, capable of a slight longitudinal movement. Each plate is pierced with a number of equal and equidistant circular apertures, slightly larger than the candles. Of these, the apertures in one of the plates are flared downward upon one side to facilitate the descent of the tip mould while a portion of the slide acts in conjunction with the stationary racks, to detain the candle, without compressing its sides.

Claim.—The arrangement of the stationary perforated racks B B′ B″, and the perforated slide C, adapted to retain and centre the candle while permitting the descent of a full-sized tip mould, substantially as set forth.

No. 36,799.—THOMAS ROWE, of New York, N. Y.—*Improvement in Machines for Crushing Linseed, &c.*—Patent dated October 28, 1862.—The substance to be crushed is introduced through a channel passing down through the centre of the vertical shaft in such a manner as to cause it to be fed between the crushing wheels. The substance is discharged through an aperture close above the slotted part of the shaft.

Claim.—Introducing the substance to be crushed through a channel *e* passing down through the centre of the vertical shaft C, and discharging through the aperture *f* between the crushing wheels E, substantially as and for the purpose herein shown and described.

No. 36,800.—JOHN RYNEARSON, of Farmington, Ill.—*Improvement in Harvesters.*—Patent dated October 28, 1862.—Upon the end of an arm which is pivoted to the upper part of a high frame is mounted a rake, which is pivoted in the end of the arm so as to admit of the teeth being turned into an effective position to remove the grain from the platform and falling back in leaving the grain. The rake is retracted by means of a spring which holds it against a stop pin in a position at right angles to the shaft. Pivoted upon and covering the rake is a yielding hood, which serves to press the grain while being raked from the platform and hold it in a compact body in front of the rake. An inclined plate formed with a flange is attached to the platform and serves as a fender to catch the grain as it is raked from the platform to prevent its being scattered and deposits it compactly upon the ground.

Claim.—First, in the described combination with the vertically curved platform G the rake H, pivoted to and projecting horizontally forward from the rake arm I, by which it is carried in a vertical orbit, all as herein shown and described.

Second, the guide L and spring *k*, operating in the described combination with the pivoted rake-head H, to present it in the proper position to gather the grain and afterward retract it therefrom.

Third, the fender Q, employed in combination with the pivoted rake H, in the manner and for the purpose specified.

Fourth, the yielding hood *i*, operating in combination with the revolving rake H I, substantially as and for the purpose explained.

Fifth, a platform constructed of vertically curved slats placed transversely of the machine at sufficient distance apart to admit the points of the rake teeth between them, when used in combination with the rake H I revolving in a vertical orbit, all as herein shown and described.

No. 36,801.—DANIEL SAGER, of Albany, N. Y.—*Improvement in Self-Acting Wagon Brakes.*—Patent dated October 28, 1862.—The brake-block, which is made of metal in the form of the frustum of a wedge, has an orifice M to receive the axis of the brake-bar. On the outer end or mouth of this orifice is a shallow groove for the purpose of passing it over the flange on the axle. On the lower part of this groove is a flange *t*, which passes through the space *y* on the axle and prevents the block from escaping from the axle.

Claim.—The brake-block X, formed as shown, and fitted to revolve freely upon an axle from the extremity of the brake-bar, for the purpose set forth.

Also, the mode of construction by which the brake-block is fitted and secured upon the axle, to wit, the combination of the orifice M, the groove *a b* and its flange *t*, with the axle G, flange *f*, and space *y*, substantially as described and for the purpose set forth in the above specification.

No. 36,802.—JAMES and A. W. SANGSTER, of Buffalo, N. Y.—*Improvement in Lamp Chimney Fastenings.*—Patent dated October 28, 1862.—At the lower end of the deflector, and forming a part of the same, is a stationary lip turned over so as to catch the flange at the base of the chimney. F represents a lever which is provided with a movable lip forming a part of said lever, and projecting over the base of the deflector far enough to catch and hold the chimney. The deflector has also a thumb piece K attached to it and so arranged in connexion with a spring as to permit the chimney to be readily attached and detached.

Claim.—The stationary lip I, the movable lip on the lever F, the spring E, the thumb piece K, and the aperture V, arranged in the manner and for the purpose herein set forth and described.

No. 36,803.—DAVID SAUNDERS, of New York. N. Y.—*Improvement in Machines for Cutting and Planing Metals.*—Patent dated October 28, 1862.—This invention relates to the mode of adjusting and presenting the metallic article to the finishing tool, and also to the means for operating the various tools required, and directing the action of the same upon the metal. It does not admit of a brief description.

Claim.—First, the arrangement of the plates *c* and *d*, screws *e e e' e'* actuated by the shafts 4 5 and 6, and gearing connecting the same, in combination with the table *g*, applied as and for the purposes specified.

Second, the shaft *h* and wheel *h'*, in combination with the said plates *c* and *d*, adjusted as aforesaid and applied in the manner and for the purposes specified.

Third, the secondary bed *l*, in combination with the plate *k*, when said bed and plate are connected by the flanges, substantially in the manner specified, so as to provide for inclining the second bed *l*, as and for the purposes set forth.

Fourth, the arrangement of the gearing 13 14 15 and 16 for actuating the wheel *p* that gives an end movement to the rod *o* and slide *u*, as set forth.

Fifth, the slide *u*, applied as aforesaid, in combination with the tool stock *x* and rotary lever or cutter *y* fitted and acting as and for the purposes specified.

No. 36,804.—O. SHERWOOD, jr., of Independence, Iowa.—*Improvement in Grinding Mills.*—Patent dated October 28, 1862.—This invention relates to a method of regulating millstones for the purpose of causing them to grind finer or coarser as may be desired, and it consists in having the bed-stone arranged in such a manner that it may be raised and lowered on the spindle, while the latter, as well as the upper stone or runner and the water-wheel, have a rotary motion only.

Claim.—The adjustable frame D, having the bed-stone C placed upon it, and arranged as shown, in connexion with the spindle or shaft B and the upper stone or runner, so as to be operated through the medium of the bridge-tree G, for the purpose herein set forth.

No. 36,805.—J. D. SMEDLEY, of Chicago, Ill.—*Improved Grate for Burning Petroleum and other Liquid Fuel.*—Patent dated October 28, 1862.—The grate in this apparatus consists of a trough or concave-shaped vessel A, with the bottom made angular or curved to such a degree as to govern the quantity of surface of supply and combustion The substance constituting the fuel is fed through a pipe, the supply being regulated by a cock in the same. The grate is perforated over its whole area for the reception of pipes or air conductors which extend above the surface of the grate in the fire chamber for the purpose of aiding in the combustion of the fuel, the air being heated in its passage through the pipes. The specification describes various modifications of this device.

Claim.—First, the arrangement and combination of the trough or grate A and the air-conducting pipes B B, substantially as described and for the purpose above set forth.

Second, the arrangement and combination of the trough or grate A, the air-conducting pipes B B, &c., and the supply pipe D, with its gauge cock I appended, substantially as described and for the purpose above set forth.

Third, the arrangement and combination of the trough or grate A, the air-conducting pipes B B, &c., the supply pipe D, with its gauge cock I appended, and the damper E, substantially as described and for the purpose above set forth.

Fourth, the arrangement and combination of the trough or grate A, the air-conducting pipes

B B, &c., the supply pipe D with its gauge cock I appended, the damper E, and the lower air chamber L, substantially as described and for the purpose above set forth.

Fifth, so constructing the trough or grate A, narrowing from its upper surface and edges at an angle or curve to the bottom, as to present continually reducing areas of surface, substantially as described and for the purpose above set forth.

No. 36,806.—W. B. SMOOT, of Washington, D. C.—*Improvement in Combined Time and Concussion Fuzes for Shells.*—Patent dated October 28, 1862.—In the top of the fuze stock is screwed a piece of metal G, perforated by two holes and having a groove upon that part of it which projects from the fuse stock, the groove and holes to be filled with priming and quick match. To this piece of metal G a perforated disk L is fastened by a quick match, and having in it a groove filled with percussion powder. At the discharge the disk L is torn from its fastenings by the shock and caused to descend upon a tightly fitting ring below, with sufficient force to ignite the percussion powder in the groove, which then ignites the column of fuze composition at the bottom of the metallic stock.

Claim.—First, the improvement in the means of igniting time fuzes by combining the windage and concussion principles, substantially as and for the purposes set forth.

Second, the improvement in time fuzes of providing them with a communication with the shell closed by a sliding valve or plunger just above the point at which the fuse ignites, substantially as and for the purposes set forth.

No. 36,807.—F. B. STEVENS, of New York, N. Y.—*Improvement in Surface Condensers.*—Patent dated October 28, 1862.—At the port of entrance of the condenser or cooler is placed a cock or valve, and another cock at the port of exit, and by these two cocks all communication with the engine is shut off. Between the cock closing the port of entrance and the condenser or cooler is placed a pipe leading to the boiler, upon which pipe is a cock to open or close the communication. Between the cock closing the port of exit and the cooler or condenser is placed a pipe with a cock attached communicating with the atmosphere, so that when the cocks closing the ports of exit and entrance are closed, steam may be led to the condenser or cooler, and, after being condensed, drawn off.

Claim.—Closing the ports of exit and entrance of a condenser or cooler of a steam engine, and attaching pipes leading to the boiler and to the atmosphere, substantially as described.

No. 36,808.—F. B. STEVENS, of New York, N. Y.—*Improvement in Shields for Surface Condensers.*—Patent dated October 28, 1862.—This invention consists in the employment of a guard for enclosing a surface condenser or cooler, placed on the outside submerged surface of a vessel, for the purpose of preventing the condenser from being injured by contact with any object.

Claim.—A guard, enclosing a surface condenser or cooler, placed on the outside submerged surface of a vessel, substantially as described.

No. 36,809.—F. B. STEVENS, of New York, N. Y.—*Improvement in Surface Condensers.*—Patent dated October 28, 1862.—The surface condenser or cooler is formed by placing on the outside of the submerged surface of a steamer a system of tubes with headers, elbows, and return bends, arranged one behind the other, so as to cause little obstruction to the passage of the steamer through the water, and at the same time to allow sufficient water to flow around the tubes to condense the steam or cool the injection water.

Claim.—Forming a surface condenser or cooler by a system of headers, elbows, and horizontal tubes, placed on the submerged surface of a steamer, as herein set forth and described.

No. 36,810—F. B. STEVENS, of New York, N. Y.—*Improvement in Surface Condensers.*—Patent dated October 28, 1862.—In this invention the surface condenser or cooler is formed by placing on the outside of the submerged surface of a steamer one or more thin and flat passages with parallel sides, containing the steam to be condensed or water to be cooled, (a lamina of the water in which the steamer floats being interposed between the passages,) the object being to offer but little obstruction to the passage of the steamer through the water.

Claim.—First, forming a surface condenser or cooler on the outside submerged surface of a steamer by placing there one or more thin and flat passages, containing the steam to be condensed or water to be cooled, and having a lamina of the water in which the steamer floats interposed between them.

Second, the passages so arranged that each passage has its own separate port of entry and of exit.

No. 36,811.—JAMES THOMPSON, of Vevay, Ind.—*Improvement in Churns.*—Patent dated October 28, 1862.—The journals of the cylindrical dasher are fitted in bearings which are formed each of a crotch fastened to the inner surface of the tub and framing upward. The inner end of the shaft has a notch for the reception of a tongue projecting from the journal. The dasher is provided with a handle by which it is removed from the tub when necessary.

Claim.—The arrangement of tube A, having the flaring crotches B B', in combination with the rotary dash D, having in one plane a handle F and the tongue *c*, which tongue is adapted to couple with the notched shaft E, the whole being constructed and operating in the manner set forth.

No. 36,812.—A. C. TURNING, of New Haven, Conn.—*Improved Mode of Uniting Timbers.*—Patent dated October 28, 1862.—Instead of tuscums extending across the plate, as has been done in some cases, they are broken into rows of separate knobs; and instead of slots across the timber for the ribs or tuscums to enter, separate holes are fitted for the knobs, so that each must tear out a block of solid timber before there can be a separation.

The front of the knobs is hooked, so that from base to point the front inclines forward of the plane section square across the timber, or at right angles to the axis of the scarfed compound piece, so that there will be a draw co-operating with the bolts.

Claim.—The construction and employment of such iron bearings or steps, when formed or furnished with teeth or knobs, standing apart and in rows, substantially as and for the purpose described.

Also, the hooked front of the rows or knobs for giving a draw, as above described.

Also, the construction and employment of rolled iron strips with teeth or knobs, substantially as above.

No. 36,813.—RICHARD VOSE, of New York, N. Y.—*Improvement in Car Springs.*—Patent dated October 28, 1862.—This spring is composed of one or more series or clusters of light volute springs, and a series of layers of India-rubber or other elastic yielding substance, arranged with a series of guiding and steadying metallic plates within a suitable protecting casing.

Claim.—The arrangement within a suitable casing of one or more series of volute springs I I, and a number of layers H H of some elastically-yielding substance, when the requisite number of metallic combining and steadying plates D E are arranged with the said volute springs and elastically-yielding layers, in the manner represented by the accompanying drawings, and herein particularly set forth.

No. 36,814.—HENRY UNDERWOOD, of New York, N. Y.—*Improved Belt Coupling.*—Patent dated October 28, 1862.—This invention consists in having the rivets used in joining the ends of belting, connected together in pairs by a strap, the rivets and strap being swaged in proper form from a single piece of copper, so as to prevent the ends of each lap of the belt from being curled up in its passage over the wheel or pulley on which it runs.

Claim.—The connecting of rivets B permanently in pairs by means of straps C, swaged with the rivets from or out of a single piece of copper, to form an improved belt coupling or joint.

No. 36,815.—J. M. and W. C. WALLIS, of Milton, Iowa.—*Improvement in Hand Corn Planters.*—Patent dated October 28, 1862.—This invention relates to that class of corn planters designed for manual operation, and consists in the arrangement of a plunger provided with a seed cell, and used in connexion with a cut-off or partition, spring plates, and a stop, so that the seed may be easily measured, dropped, and planted at one operation.

The separate parts are disclaimed.

Claim.—The plunger D provided with the recesses *g m*, in combination with the partitions E provided with the cut-off brush *k*, and the elastic plates F B, and fixed plate *d*, all arranged relatively with each other and within the box A, to operate as and for the purpose herein set forth.

Also, the stop G attached to the plunger D, and provided with the spring *o*, when arranged relatively with the side *c* of the box A, and used in combination with the elastic plates F B, inclined partitions E, brush *k*, and fixed plate *d*, as and for the purpose set forth.

No. 36,816.—H. F. WIESECK, of New York, N. Y.—*Improved Sugar Tablets for Containing Medicines.*—Patent dated October 28, 1862.—This invention consists in forming tablets of sugar crystals marked with numbers in figures of like material, whose capillary interstices are disengaged of the air contained therein and then filled up with alcoholtures, (remedies in alcoholic form,) whereby the remedies remain diffused among the sugar crystals, even after the vehicle of them (the alcohol) has evaporated.

Claim.—First, the manufacture of tablets of sugar crystals, bearing numbers in figures of like material.

Second, the process which completes the manufacture, and endows the tablets of sugar crystals with a healing power, by exhausting the air from their capillary interstices, and then impregnating them with alcoholtures (remedies in alcoholic form.)

No. 36,817.—JOHN WOODWARD, of Wilmot, N. H.—*Improvement in Gates.*—Patent dated October 28, 1862.—In this invention the gate is made twice or more than twice the length of the space used as a passage way, and hung upon rollers, so that the portion of the gate back of the front rollers shall balance the portion forming the gate proper, thus preventing the front end from tipping down.

Claim.—A gate twice or more than twice the length of the space used as a passage way, provided with the grooved rails and flanged rollers, constructed and operating in the manner and for the purpose set forth.

No. 36,818.—J. G. YOUNG, Jr., of Auburn, Maine.—*Improved Boot and Shoe Stretchers.*—Patent dated October 28, 1862.—This invention consists in the arrangement of three lifting rods for raising the instep, the toe, and for spreading them, respectively, in combination with three pairs of toggle arms acting on the several sections of the stretcher, and with a sliding nut operated by a hand screw in such a manner that the several parts of the stretcher can be raised simultaneously, or one independently of the other, as may be desired.

Combined with the central body of the stretcher is a rising and falling cap, in such a manner that by the action of the cap the toe and the instep can be raised either separately or simultaneously, as may be desired.

Claim.—First, the arrangement of the lifting rods E E′ H, in combination with the nut F, screw G, toggle arms *b c b′ c′ l*, cap C, and side pieces D, all constructed and operating substantially in the manner and for the purpose shown and described.

Second, the cap C, arms *b c b′ c′*, lifting rods E E′, in combination with the central part B, screw G, and nut F, loop *i*, and hook *j*, when arranged to operate in the manner and for the purposes specified.

No. 36,819.—S. C. CRANE, of Rochester, N. Y., assignor to D. R. BARTON, of the same place.—*Improvement in Skates.*—Patent dated October 28, 1862.—This invention is explained by the claim and engraving.

Claim.—Connecting the foot piece B and the runner D of skates substantially in the manner specified, viz: by placing the clamping points *e* at one-fourth of the width of the runner below the foot piece, in combination with the collar C, when the latter is constructed as described, and is placed entirely below the lower face of the foot piece, in the manner and for the purposes specified.

No. 36,820.—SMITH GROOM, of Troy, N. Y., assignor to Himself and JACOB SHAVOR, of the same place.—*Improvement in Explosive Canister Shot.*—Patent dated October 28, 1862.—Through the rear end of the projectile is placed a time fuze, around which, and in the rear end of the projectile, is placed powder, for the purpose of drawing forward the missives and conical wooden plug at the forward part of the projectile, or for exploding the projectile. Upon the powder is packed the wadding, over which are placed round shot or other missiles. The conical wooden plug is then driven into the end of the projectile over the shot.

Claim.—A canister shot or shell so constructed as to shoot forward the wood or metal plug A, war missiles O, and wadding E, in the manner substantially as herein described and set forth.

No. 36,821.—A. L. POITEVIN, of Paris, France, assignor to LEOPOLD EIDLITZ, of New York, N. Y.—*For application of Photography to Printing.*—Patent dated October 28, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—First, the application in the process of photographic engraving hereinbefore described, of a plate of glass or other suitable surface coated with a solution of gelatine which is allowed to set or solidify, and is then (either before or after being dried) immersed in or exposed to the action of a solution of bichromate of potash or other chromate whose base does not produce an insoluble compound with gelatine.

Second, the application in the process of photographic engraving, in manner hereinbefore described, of a plate or surface coated with a mixture of gelatine and bichromate of potash or other suitable chromate, or first coated with gelatine, and then exposed to the action of the bichromate of potash or other suitable chromate, in either case without the addition of nitrate of silver.

Third, the application of a solution of proto-sulphate of iron to the surface of the photographic gelatine engraving, before pouring the plaster upon it, in the process of taking a plaster cast from the gelatine, as hereinbefore described.

Fourth, the mode hereinbefore described of metallizing the surface of the gelatine before submitting it to the electrotype process.

No. 36,822.—LEWIS POWE, of Pittsburg, Pa., assignor to MCCURDY & Co., of the same place.—*Improvement in the Manufacture of Sheet Copper* —Patent dated October 28, 1862.—The block of copper previously cast for the purpose is passed through the reducing rollers until it is brought down very nearly to the required thickness. The sheets thus formed are then allowed to cool before being subjected to the finishing process, and when cold they are immersed in a bath of dilute sulphuric acid, which removes the oxyd or scale from the surface, thus leaving it rough and uneven. The sheets are then placed in a furnace and again heated to a cherry red, after which they are passed, at a red heat, through highly polished finishing rolls, which communicate a very smooth exterior surface to the copper. The sheets are then sprinkled with a dilute solution of ammonia, reheated in an annealing oven, and afterwards plunged in cold water.

Claim.—The mode of treating the sheets of copper after they have been passed through the reducing rollers, substantially as and for the purpose hereinbefore set forth.

No. 36,829—R. BOEKLEN, of Brooklyn, N. Y., and G. W. SCHRAMM, of New York,

No. 36,823.—JOHN SLINGERLAND, of Greenpoint, N. Y., assignor to Himself and J. H. Kelly, of New York, N. Y.—*Improved Window Stop.*—Patent dated October 28, 1862.—This invention consists in the combination of a movable incline piece having its face toothed or notched, and to which is hinged a swing catch or stop, and an elastic roller, so arranged that the roller shall bind between the inclined piece and the casing to hold the sash in an elevated position, and that the same may be released by adjusting the position of the inclined surface.

Claim.—First, the combination and arrangement of the movable inclined piece D and the stop *d'*, or its equivalent, with the elastic roller E, substantially as and for the purpose herein described.

Second, in combination therewith, the employment of teeth, or of equivalent roughened surface on the face of D, for the purpose herein set forth.

No. 36,824.—CHARLES STOWELL, of Concord, Mass., assignor to Himself and W. M. GAYLORD, of Northampton, Mass.—*Improvement in Blasting by Electrical Currents.*—Patent dated October 28, 1862.—This invention relates to the connexion of two electric circuit wires by a thin strip of platina in a manner to shield the platina from injury, and enable the shield to receive a gunpowder or an explosive charge without any material disturbance of the platina.

Claim.—The improved arrangement or application of the shield, the circuit wires, and the strip of platina, substantially as described.

No. 36,825.—WILLIAM MULLALLY, of St. Paul, Minn.—*Improvement in Pumps.*—Patent dated October 28, 1862.—This pump consists of an upper and lower water space, provided with valve-guarded ingress ports, and separated by a diaphragm constructed in part of metal and in part of a flexible material, and operated by a hollow rod, which constitutes also the discharge pipe. The central part of the diaphragm is of metal, and is provided with a chamber communicating with the water spaces before named through ports guarded by an internal valve.

Claim.—The combination of the hollow operating and discharging rod K, hollow diaphragm E F G I, internal valve J, chambers *a b*, and ports N O *f g*, the whole being arranged to operate in manner substantially as and for the purposes set forth.

No. 36,826.—GIUSEPPE TAGLIABUE, of New York, N. Y.—*Improved Apparatus for Testing Coal Oil.*—Patent dated October 28, 1862.—Attached to a hollow stand, and extending above the same, is a vessel for holding water or coal oil and water. Within this vessel is placed a cup for holding the coal oil to be tested, having a ring within the same into which a thermometer tube is inserted. Attached to the cover of the water vessel is a perforated tube extending above and below the cover. Over an aperture in the cover is placed a dome with an opening in front and at the top, to allow of lighting the lamp and permit the escape of the product of combustion. Openings in the cover of the water vessel are provided with smaller sliding or rotating covers for the admission or exclusion of air.

Claim.—First, the vessel B extending above the stand A, and having holes in it near the top.

Second, the cup P with its projections on the outside.

Third, the ring Q in the cup P that holds the cover C and its appendages upright in any position other than over the vessel B.

Fourth, the perforated tube D that surrounds the thermometer and enters the ring Q, allowing the cover C to stand in any position.

Fifth, the dome F with the opening L in front, for applying the lighted paper or wood, and the opening K on top.

Sixth, the rotating covers J J on the cover C; each and all as and for the purposes substantially as described.

No. 36,827.—LAMBERT ANDREWS, of Plantsville, Conn.—*Improvement in Mole Traps.*—Patent dated November 4, 1862.—The object of this invention is to secure the animal without injuring his skin in capturing him, and it consists in the use of a box provided with a plate of a size to nearly cover the top of the box, having pins arranged on the under side and at each end of the plate, the latter being held over the box by any proper device by which the animal will cause the cover to drop as it burrows in the dirt which is placed in the trap.

Claim.—An improved mode of constructing and using mole traps, viz: The combination of the plate *e*, pins *f*, (arranged at each end of said plate *e*,) and the box *a*, (with proper spring device,) when placed in the ground as described, and the parts arranged and operating substantially in the manner and for the purpose described.

No. 36,828.—S. G. BARKER, of Carbondale, Pa.——*Improvement in Scale Beams.*—Patent dated November 4, 1862.—This invention consists in a method of making the suspension point or knife edge of a weighing beam adjustable, both vertically and longitudinally, upon the said beam, for the purpose of readily regulating the same, and also to enable the weigher to change the position of the said suspension points in relation to the fulcrum, so that he can at any time readily adapt the beam or scale to either gross or net weight or foreign standard.

Claim.—Making the suspension point *c* adjustable upon the beam A, by means of the slide B, in combination with the threaded stem *k*, jam nuts *i i*, boss *k*, and thumb screw *m*, the same being arranged to operate substantially in the manner described, for the purpose specified.

No. 36,829—R. BOEKLEN, of Brooklyn, N. Y., and G. W. SCHRAMM, of New York, N. Y.—*Improvement in Hammers.*—Patent dated November 4, 1862.—The hammer head is constructed with a face at each end, the two faces being of different character for different kinds of work. The claw is made on one side of the head, on a line with the handle.

Claim.—The construction of a hammer head, with a face at each end, and a claw on one side, substantially as and for the purpose herein specified.

No. 36,830.—J. L. BOOTH, of Rochester, N. Y.—*Improvement in Grain Separators.*—Patent dated November 4, 1862.—This apparatus is composed of a hopper supported upon legs, which latter are provided at their lower ends with metallic points in order to keep them firm upon the floor. Under the hopper is arranged a series of screens. The legs are of such size and material as to allow the frame and screens to be readily vibrated by the hand in separating the grain.

Claim.—The above-described apparatus, composed of the frame A, provided with hopper E, screens C, the standards B B B, and spurs *l l l*, so arranged that it may be secured to the floor at any place, in the manner shown, and operating by vibrations, substantially as herein set forth.

No. 36,831.—WILLIAM BOURN, of Rochester, N. Y.—*Improved Boot-Jack.*—Patent dated November 4, 1862.—This device is formed with two similar side pieces, between which, and extending from front to rear, is fitted a double-acting wedge, by means of which the jaw may be opened and closed by the free foot of the person using the same, the parts being connected together by a transverse bolt.

Claim.—The combination of the side pieces A A, double-acting wedge B, and bolt C, arranged in such a manner that the wedge forms a bearing the whole length between the said pieces, and operates the jaws automatically by the weight of the operator, substantially as herein set forth.

No. 36,832.—ADOLPH BROWN and FELIX BROWN, of New York, N. Y.—*Improvement in Friction Couplings.*—Patent dated November 4, 1862.—This invention consists in the arrangement with a wheel, pulley, or clutch placed loosely upon a shaft, of a friction-band attached to an arm securely fastened on the shaft, one end of the said band being firmly attached to the said arm while the other end is attached to a lever or crank turning in a bearing at the end of the arm. This crank or lever is connected through a universal joint with an arm situated loosely on the shaft, and capable of sliding on the same. The action of this loose arm on the crank in the fast arm will operate the friction band so as to loosen or tighten the same around the wheel, pulley, or clutch as may be desired, and consequently coupling or disengaging the same from the shaft, while the latter is in motion.

Claim.—The herein-described friction coupling, constructed and operating in the manner and for the purpose substantially as specified and set forth.

No. 36,833.—A. B. COREY, of Sprague, Conn.—*Improvement in Machinery in Dressing and Sizing Warps.*—Patent dated November 4, 1862.—This invention consists in the employment of a third roller termed an "evener" in addition to the "top" and size or plunge roller, and which is arranged upon and above the top roller, its axis being disposed a little in rear of the vertical plane of the axis of the plunge roller, the object being to remove from the warp-thread the surplus sizing adhering to the same.

Claim.—The arrangement and combination of the evener with other warp-dressing machinery, substantially as described.

No. 36,834.—JOSEPH EVANS, of Newark, N. J.—*Improvement in Fruit Gatherers.*—Patent dated November 4, 1862.—To the upper end of a pole or handle are secured two curved jaws jointed together so as to enable them to open and clasp the fruit. To the upper ends of the jaws are secured skeleton concaves formed of wires for holding the fruit, and are actuated by means of a rod secured to their lower ends and extending down the handle. To the wires is attached a tubular conveyer to conduct the fruit to a receptacle below, and so connected as to be easily attached or detached. To the top of the jaws are attached knives by means of set screws, which knives can be easily attached or detached and serve for pruning the trees.

Claim.—Attaching and detaching the conveyer K to and from the jaw levers, by means of the curved spring-wires or rods I I and lateral eyes *i i*, the whole arranged, combined, and operating substantially as and for the purpose herein set forth.

Also, the particular arrangement of the whole instrument, consisting essentially of the cross levers B B, connecting bars D D, sliding rod E, guide collar G, pole A, with the cylindrical end H, and detachable conveyer K, substantially as herein described.

Also, the vertical separating wires *d d* of the jaws for properly guiding the twigs to the knives in pruning, in combination with the knives L L, at the tops of the jaws, arranged and operating substantially as herein described.

No. 36,835.—FRANCIS GARDNER, of Roxbury, Mass.—*Improved Canteen.*—Patent dated November 4, 1862.—The canteen is formed with several compartments for containing water and rations, with a space for a pipe, a drinking cup, and water filter.

Claim.—The within-described canteen, with its various compartments, removable drinking tube and filter, constructed and arranged as described.

No. 36,836.—R. J. GATLING, of Indianapolis, Ind.—*Improvement in Revolving Battery Guns.*—Patent dated November 4, 1862.—This invention consists of a peculiarly constructed revolving lock cylinder or breech piece, in combination with a grooved carrier and barrels all rigidly secured upon the same shaft and revolving together when the gun is in operation. The operation of cocking and firing the gun is performed without the use of a trigger by means of an inclined plane in the rear of a ring which surrounds the forward end of the lock cylinder, the inner tubes which contain the locks serving to press the cartridge chamber firmly against the rear end of the barrels while being discharged, and an outer casing and disk protecting the locks from injury.

Claim.—First, the combination of the lock cylinder or breech D with the grooved carrier C, circular plate F, and barrels E E, &c. The lock cylinder or breech carrier and circular plate being firmly fastened upon the main shaft N, and the locks, grooves in the carrier, and barrels, being arranged on a line parallel with the axis of revolution, the whole revolving together when the gun is in operation, substantially as described.

Second, the use of as many locks as there are barrels, said locks revolving simultaneously with the breech and barrels, and being arranged and operated substantially as set forth.

Third, the stationary ring P provided with inclined planes on its rear edge, in combination with lock cylinder D and locks, when constructed and operated for the purposes substantially as set forth.

Fourth, the tubes *a a*, *&c.*, furnished with the flanged breech pins *c c*, *&c.*, and springs *e e*, *&c.*, and which contain the lock hammers *b b*, *&c.*, and mainsprings *d d*, *&c.*, in combination with the revolving breech D, disk I, and swell O, when constructed, arranged, and operated for the purposes substantially as set forth.

Fifth, the disk I, in combination with the external breech piece or casing A, which forms a shield or covering for the lock cylinder, and which protects the locks and cog-wheels from injury.

No. 36,837.—H. C. HUNT and G. W. DEVIN, of Ottumwa, Iowa.—*Improvement in Pumps.*—Patent dated November 4, 1862.—In the lower part of a well or reservoir is a semi-cylindrical cast-iron case having two compartments divided by a partition in the centre, provided each with an induction opening, and communicating with an eduction pipe at the upper part of the casing provided with a valve. In each compartment of the said case is a piston which form radii of a semicircular plate F, working against a cylindrical projection at the lower end of the partition in the centre of the case. The plate F is provided with arms at each side connected by chains to a lever above, by means of which the pump is operated.

Claim.—The stationary semi-cylindrical case B provided with the slide valve D, abutment or partition *a* and induction openings *c c*, with the eduction pipe C placed between them, in combination with the oscillating plate F, having the pistons E E′ attached and placed respectively in the compartments *b b′*, and provided with the arms *g g*, which are connected to a suitable lever G, all arranged to operate as and for the purpose herein set forth.

No. 36,838.—L. F. HALL, of Fonda, N. Y.—*Improvement in Shawl Pins.*—Patent dated November 4, 1862.—This invention is explained by the claim and engraving.

Claim.—A shawl pin constructed of a single piece of wire bent so as to form two parallel prongs *a a*, provided with hooks *b b* at one end, and a hook *c* at the opposite end, as herein shown and described.

No. 36,839.—JAMES GORDON, of Caledonia, N. Y.—*Improved Printing Press.*—Patent dated November 4, 1862.—This invention consists mainly in the employment of a cylinder having a form fitted in its periphery and so operated as to have a reciprocating and partially rotating motion, and working in connexion with a reciprocating bed which receives the sheets, and upon which the sheets receive the impression from the form cylinder, the same being used in connexion with a reciprocating form bed and pressure rollers, all so arranged as to enable both sides of a sheet to be printed in passing once through the press, and the press to be fed at both ends to render the printing operation continuous, the printed sheets being also discharged from both ends of the machine.

Claim.—First, a partially rotating cylinder B provided with a type form F, and operating in connexion with a reciprocating bed G′, which holds or retains the sheets while they are receiving the impression from the form F on cylinder B, in combination with the reciprocating form bed S and pressure rollers Q Q, all arranged as shown and in connexion with conveying tapes, to operate as and for the purpose herein set forth.

Second, the manner of adjusting or raising and lowering the rollers Q Q, as shown and described, to wit, by means of the pitmen *e** attached to the bearings R, and to cranks *b**, on shafts *a** *a**, which are connected by a bar *d** secured to the ends of arms which project from said shafts, and one of the latter having a forked arm *g** attached to it, in which an eccentric *f** on shaft P works.

No. 36,840.—G. P. GORDON, of Brooklyn, N. Y.—*Improvement in Printing Presses.*—Patent dated November 4, 1862.—This invention does not admit of a brief description.

Claim.—A platen which shall be stationary for the reception of the sheet and for the reception of the impression *a*, when such platen shall be vibrated for the purpose set forth; *b*, when such platen shall be placed at an angle from the horizontal or vertical position, in order that the printed sheet may be readily delivered by the rolling tympan sheet and sheet-taking nippers, as shown; *c*, when such platen shall be combined with the sheet-taking nippers, held and carried substantially as described; *d*, when such platen shall be combined with the rocking nipper arms and the rolling tympan operating substantially as described, for the purposes fully described.

Second, the sheet-taking nippers *a*, when held and carried by the rocking arms in combination with a stationary feed-table as shown for the purpose set forth; *b*, when such sheet-taking nippers shall be swivelled and hung upon a rod, so that they must move in any direction in which the rod may be turned, and yet, at the same time allow the jaws of such nippers to have an independent movement to and from each other, to take and deliver a sheet; *c*, when said sheet-taking nippers shall be operated as shown, for the purpose specified; *d*, when said sheet-taking nippers holding the sheet and resting upon the platen shall vibrate with the platen for the purpose shown.

Third, the sheet-guide or shield *a*, when such sheet-guide or shield shall be used in combination with the rocking nipper arms and the rolling tympan, operating substantially as shown; *b*, when such sheet-guide or shield shall be used in combination with the pile table, for the purpose fully shown.

Fourth, for the purpose of giving a more thorough distribution and for the supplying ink to the inking rollers, a revolving tabular distribution surface upon one side of the form, and a revolving cylindrical distribution surface upon the other side of the form, as herein fully shown.

Fifth, detaching and thereby suspending the operation of the nippers, nipper arms and rolling tympan, for the purpose specified.

Sixth, the sheet-catches or holders K K; *a*, when such sheet catches or holders shall be combined with the pile table for the purpose described; *b*, when such sheet-catches or holders shall be combined with the sheet-guide or shield, for the purpose shown.

Seventh, projecting the stationary feed table over and beyond the face line of the platen, for the purpose specified.

Eighth, the sheet gages constructed substantially as described, in combination with a stationary feed table, for the purpose set forth.

No. 36,841.—J. H. IRWIN, of Chicago, Ill.—*Improvement in Lanterns.*—Patent dated November 4, 1862.—At the upper part of the lamp is a jacket provided with a cap having a circular opening at its centre, through which the wick tubes pass. This jacket extends down about half the height of the lamp and is provided with a flanch at its lower end which projects outward and downward around the lamp. At the lower end of the lamp is also a flanch which projects outward and upward all around the lamp. The space between the flanches has a series of vertical plates placed in it radially; the object being to prevent the light from being extinguished by the movements of the lantern.

Claim.—The combination of the two flanges *b c*, and plates *d*, with the lamp E, jacket G and lantern A, in the manner herein shown and described.

Also, having the cap H arranged below the upper extremities of the wick tubes, as herein shown and described.

No. 36,842.—GAMALIEL JACKSON, of Cincinnati, Ohio.—*Improved Watchmaker's Lathe.*—Patent dated November 4, 1862.—This invention relates to a method of fastening the piece to be turned in the lathe, and it consists in arranging the grasping apparatus to slide on the spindle by means of rods parallel to it, and to which the grasping part is permanently fixed, in such a manner that the piece may be grasped at any part of it. When thus secured one of its ends will project through the grasping apparatus, while the other rests in the stationary head centre. The chuck, containing the article to be turned, is arranged to be moved on the end of the spindle by means of a ball-and-socket joint, in such a manner that the centre of the socket will be the head centre of the lathe in which one end of the piece to be turned will rest, while the other is being adjusted on a line with the spindle.

Claim.—First, the arrangement of grasping apparatus on parallel adjustable rods *l l*, in such a manner that the piece to be turned may be grasped at any part, one end of it resting in a stationary centre.

Second, the application of ball-and-socket motion to the head of a lathe, in such a manner that one end of a piece of work may be adjusted, while the other end rests in a stationary centre, constructed and operating as herein set forth.

No. 36,843.—SAMUEL JOHNSTON, of Buffalo, N. Y.—*Improvement in Harvesters.*—Patent dated November 4, 1862.—This invention relates to a combination and arrangement of parts whereby the inner shoe acts as a brace to the finger-beam, and the meshing of the pitman gearing is maintained while the outer end of the finger-beam has freedom of motion up and down, and when necessary, both the inner and outer ends of the finger-beam may be adjusted together either higher or lower. The invention relates also to the construction of the automatic hand-rake, consisting of an undulating groove or cam track with a yielding gate-guiding standard, cam, and angular rake-arm.

Claim.—First, the arrangement and combination in a reaper and mower of the hanger I, curved guide O, hinge joints M and *g*, and shield P′ of shoe P, or their equivalents, constructed and operating substantially in the manner and for the purpose described.

Second, constructing and arranging the bearing *n m*, substantially in the manner described, in combination with the pitman shaft J, shield P′, and hinge joints M and G, for the purpose set forth.

Third, the hanger I I′ I 2 I 3 *h h′*, constructed as described.

Fourth, arranging the automatic rake attachment upon the inner end of the finger-beam, by means and in the manner substantially as described and for the purpose set forth.

Fifth, the combination of the cam track, partly enclosed by rails *t t*, and a yielding gate *t*2, with the guiding eye R2, lever Z, crane-like arm U V, pivoted rake-head X, and stale Y, substantially as and for the purposes described.

Sixth, the construction of the jointed crane-like arm U V, substantially as and for the purpose set forth.

Seventh, the construction of the part V of the arm with journals, and with points of attachment for the lever Z and part U of the arm, substantially in the manner described.

Eighth, the combination of the yielding gate *t*2 and the rails *t t′* of the grooved or cam track W, substantially as and for the purpose described.

Ninth, the bearing W, with a groove and rails *t t′ t*2, constructed and operating as described, in combination with the extension S S′ of the part U of the crane-like arm, for the purpose set forth.

Tenth, the construction and arrangement of the pivoted spring-gate at the end of the horizontal groove or cam track, substantially as and for the purpose set forth.

Eleventh, the combination, in an automatic hand-rake attachment, of the eye R2 and the stale Y, for the purpose set forth.

Twelfth, the construction and arrangement of the open-slotted adjustable pole-plate N *p*, as described and for the purpose set forth.

No. 36,844.—T. J. MCGOWAN, of Cincinnati, Ohio.—*Improvement in Pumps.*—Patent dated November 4, 1862.—The nature and object of this invention are explained by the claim.

Claim.—Providing the pump bucket D, or any suitable part connected therewith, and the lower valve guard I, or any part attached to it, with screws, or their equivalents, arranged in such a manner that all the working parts of the pump may, by a simple manipulation, be connected together, and simultaneously withdrawn from the pump cylinder A, and also adjusted therein, substantially as and for the purpose herein specified.

No. 36,845.—ISAAC A. KETCHAM, of Brooklyn, N. Y.—*Improved Mode of Operating Submarine or Floating Batteries.*—Patent dated November 4, 1862.—This invention consists in the employment of an endless cable, operated by a windlass or suitable device within a fortification or vessel, and passing through an anchored pulley at the opposite side of the channel. The said cable is designed to carry one or more explosive shells, which are attached to it by their lower ends while their upper ends are provided with suitable triggers attached by wires or chains to buoys which float upon or just below the surface of the water, so that the said shells may be moved and brought under an enemy's ship as it passes by.

Claim.—The combination of a battery or connected series of explosive shells D and endless cable B, for confining and adjusting them in position, and a buoyant attachment F G for effecting their explosion by the action of a passing vessel with the buoyant indicator H, the whole being constructed and arranged to operate in the manner and for the purposes specified.

No. 36,846.—T. J. KINDLEBERGER, of Springfield, Ohio.—*Improvement in Water Wheels.*—Patent dated November 4, 1862.—This invention consists in the employment of a plurality of wheels placed one over the other on the same shaft and provided with buckets, the outer portions of which have a radial position in the wheels, and the other portions an oblique or tangential and inclined position. The wheels are placed within a cylinder provided with chutes, and a cylindrical gate is placed between the chutes and the wheels, all arranged in such a manner that a large percentage of the power of the water is obtained when the wheel is working at its maximum, and a less power than the maximum obtained when required, without expending any more than a corresponding decrease of water.

Claim.—First, the wheel B, placed within the cylinder A, and composed of a plurality of parts *a a′ a″*, three, more or less, provided with buckets D, formed of an inner tangential and inclined portion *c*, and a horizontal and radial outer portino *d*, in connexion with the chutes F and cylindrical gate G, all arranged substantially as and for the purpose specified.

Second, the arms *g*, connected to the gate by rods *f*, said arms resting or bearing on the curved inclined ways *j*, on the top of the cylinder A, and the arms *g*, turned upon the inclined ways *j*, by means of the arms *m*, attached to the shaft *n* and link *t*, substantially as described.

No. 36,847.—S. J. MADDOCK, of Cincinnati, Ohio.—*Improvement in Braiding Guides for Sewing Machines.*—Patent dated November 4, 1862.—This invention consists of a guide formed of a double gauge and plate attached to and forming part of an arm which is secured to the stem of an ordinary presser, for the purpose of sewing on braid, or other fabric of similar character, the same passing through the gauge and made adjustable for different widths of braid.

Claim.—A braid guide for sewing machines, composed of an adjustable double gauge F, and a plate A *e*, having an attached arm B, all constructed and operating together as herein shown and described, for the purpose set forth.

No. 36,848.—SAMUEL JOHNSTON, of Buffalo, N. Y.—*Improvement in Corn Harvesters.*—Patent dated November 4, 1862.—The nature of this invention consists in the construction and operation of one section of the platform or corn receiver, and its combination with two dividers and the cutting apparatus, and also in an adaptation of the finger beam and a crank arm on the same, whereby the corn harvesting attachment is combined with and supported by the inner shoe of the reaper and mower, and its movable section of platform or receiver is operated from the driver's seat of the draught frame.

Claim.—First, the combination of the two gatherers, constructed as described, with the cutting apparatus and the receiver, with inclined sides, substantially as and for the purpose set forth.

Second, the construction and arrangement of the two inclined oblique wings of a corn harvester, as herein described.

Third, imparting a swinging outward and upward movement to the movable section of the receiver as it opens to discharge the corn, and a swinging upward and inward motion thereto as it closes, substantially as set forth.

Fourth, the special means set forth for producing said motions of the movable section of the receiver.

Fifth, in the organization of a corn harvester, substantially as described, to be operated by the gearing of a grain harvester machine, extending the finger beam and knife rod, without guard fingers or knives on the extended portion, beyond the inner wings of the corn harvester, so that it may be practically attached to the supporting and driving mechanism of the grain harvester frame, and when thus attached its finger beam and knife rod shall be sustained by the inner shoe of the grain harvester, and its mechanism for operating the movable section of the corn receiver shall be in position to be operated by the driver, substantially as herein described.

No. 36,849.—J. C. MCKEE, of Urbana, Ill.—*Improved Evaporator for Saccharine Liquids.*—Patent dated November 4, 1862.—This invention consists in the arrangement of a helical inclined channel receiving the liquid to be evaporated in its middle or highest part, and discharging it at its lowest part in such a manner that the liquid, in passing from the highest to the lowest point of the helical channel, is spread in a thin sheet over a large heated surface. The heater is provided with a regulating faucet so connected with the helical evaporator that the discharge of the liquid can be regulated according to the temperature of the helical channel and the desired degree of evaporation.

Claim.—First, the evaporator F, constructed with a helical inclined channel in combination with the furnace A, constructed and operating substantially in the manner and for the purpose herein set forth.

Second, the arrangement and combination of the heater E, smoke pipe D, regulating faucet *d′*, helical inclined channel *d*, and furnace A, all constructed and operating substantially as and for the purpose described.

No. 36,850.—S. M. MOORE, of Beloit, Wis.—*Improvement in Mowing Machines.*—Patent dated November 4, 1862.—This invention relates to that class of mowing machines in which the finger beam is pivoted or hinged to the rear end of the main frame and behind the driving wheel, and it consists in a certain combination and arrangement of parts for adapting the machine to the varying circumstances under which it is required to operate.

Claim.—The combination of the main frame driving wheel, driver's seat, finger beam, drag shoes, and lifting lever, when arranged for joint operation, substantially as described and for the purposes set forth.

Also, the combination of the finger beam with the shoes or runners E F and G, having great rear projection, when arranged and operating as and for the purpose described.

No. 36,851.—JAMES NEWMAN, of London, England.—*Improved Evaporator for Saccharine Juices.*—Patent dated November 4, 1862.—This apparatus is composed of an inner and outer vessel, the inner vessel containing the juice, and having applied within it a series of rotating

disks which bake up the juice and expose it to the atmosphere, steam being admitted between the inner and outer vessels. A perforated coil of steam pipe for the admission of steam into the said space is so applied, in combination with a cold water injection pipe and overflow for the circulation of water through the said space, that the steam is delivered into the said space without passing through the water, but the steam pipe is so far immersed in the water as to enable the steam to be more or less tempered by regulating the circulation of the water.

Claim.—So applying a perforated steam pipe E, or its equivalent, within the space between the vessels A B, and in combination with the cold water injection H and overflow I, that the steam is delivered into the said space without entering the water, and is tempered by the circulation of water, substantially as and for the purpose herein specified.

No. 36,852.—J. C. NYE, of Cincinnati, Ohio.—*Improvement in Breech-loading Fire-arms.*—Patent dated November 4, 1862.—This invention consists in the employment of a key or gate attached to a hinge joint on the head of the breech pin held in position by means of a spring, and which serves to hold the breech pin in position when closed.

Claim.—The key or gate C, and the mode of applying the same to fire-arms, substantially as described.

No. 36,853.—T. G. OTTERSON, of Millville, N. J.—*Improved Fruit Jar.*—Patent dated November 4, 1862.—Just below the top of the jar is a collar or flange extending around the jar, which flange forms a rabbet to receive a packing of India-rubber, upon which the edge of the cover rests when the jar is closed. The lower edge of the cover is bevelled to allow it to press into or upon the packing.

Claim.—In combination with a glass jar, having a rabbet around the top or mouth on the outside, a glass cover shutting over on to the rabbet or packing on the rabbet, substantially as described.

No. 36,854.—JOSEPH RECKENDORFER, of New York, N. Y.—*Improvement in Pencils.*—Patent dated November 4, 1862.—The pencil is made larger at one end than at the other, and of tapering form, the larger end being provided with India-rubber, as an eraser, for a short distance, the remaining portion being filled with lead.

Claim.—The wooden case A, of tapering form, in combination with the rubber C, of larger section, and the black lead B, of smaller section, arranged therein, substantially as and for the purpose herein described.

No. 36,855.—W. M. PHELPS, of Marshall, Mich.—*Improvement in Connecting Sheet-metal for Eaves Troughs.*—Patent dated November 4, 1862.—Ante-dated June 13, 1862.—This invention consists in a method of connecting the metal sheets together before bending them to form a gutter, by locking, lapping, and soldering their edges.

Claim.—The mode of uniting the separate sheets of metal, of which eaves troughs are composed, by the use of the locked seam E, in combination with the lapped seam *e* of a stiffening bead B, substantially as and for the purpose specified.

No. 36,856.—SARAH E. PAYSON, of Peterborough, N. H.—*Improvement in Vapor Baths.*—Patent dated November 4, 1862.—This apparatus is composed of a boiler and lamp enclosed within a suitable casing to which the boiler is fitted, in such a manner as to provide for the escape of the vapor through a suitable perforated or reticulated medium, the whole being placed upon a suitable base in which are arranged suitable supports for the upper bed-clothes so that when the apparatus is placed in a bed, between the mattress and the upper clothes or covering, the said covering may be kept out of contact with the patient and also prevented from interfering with the evaporation or the diminution of the vapors, the casing being furnished with suitable means of confining the said covering to its sides to make it form, in combination with the mattress, a vapor bath of convenient form and size.

Claim.—First, the combination of a boiler, a lamp, a surrounding and supporting casing, a suitable base, and standards D D, for the support of the upper bed-clothes or covering, substantially as and for the purpose herein specified.

Second, the combination with the boiler, lamp, casing and standards, of bars H H, attached to the sides of the casing, substantially as and for the purpose herein set forth.

No. 36,857.—GEORGE RICHARDSON, of Springfield, Mass.—*Improvement in Balance Slide Valves.*—Patent dated November 4, 1862.—This invention consists in the employment, in connexion with the sliding valve and cover of the chest, of two wedge-shaped pieces, the lower one of which is provided with recesses corresponding in size and position with the ports in the valve seat, and constructed and arranged in such a manner as to form a protection for the back of the valve from the pressure of the steam, and also to admit of a ready adjustment as the valve wears away.

Claim.—First, the combination of the valve H, wedges F and G, and steam-chest cover E, when severally constructed and operating substantially in the manner and for the purpose herein set forth.

Second, the combination of the sliding valve H, having the ports *l m* situated as herein described, with the recesses *i k*, in an adjustable piece G, when operating substantially in the manner and for the purpose herein set forth.

No. 36,858.—W. F. RIPPON, of Providence, R. I.—*Improvement in Explosive Projectiles for Ordnance.*—Patent dated November 4, 1862.—This projectile is formed of a hollow casing having a number of circular openings in the interior. Within this casing is a cast-iron cylindrical tube B, having mortars cast with it and radiating from the same, the mortars being provided with vents leading to the interior of the tube. Through this cylindrical tube passes a tube F, having on its exterior a spiral groove for the reception of the fuze, which is wound around the tube, and so arranged as to cover the vents of the mortars and a vent communicating with a chamber G, which latter is formed within the shell around the tube B and the mortars, and is filled with powder. The front portion of the interior of the shell is partitioned off from the powder chamber G by means of a thin plate fitting closely around the tube B, forming a space to be filled with scrap-iron for the purpose of ballasting the projectile.

Claim.—The combination of the mortar tube B, central tube F, plate D, and plug E, with the shell A, and the openings therein *a a*, in the manner and for the purpose herein shown and described.

Having the tube F, provided with a spiral fuze grooved *d*, so arranged as to conduct the fire from chamber *s*, between the tubes F B, successively across the vents *b b b b* of the mortars to the powder chamber G and the interior tube F, as and for the purpose herein shown and described.

The combination of the partition I with the mortar tube B and the shell A, thereby forming a ballast chamber H, all as herein shown and described.

No. 36,859.—CYRUS ROBERTS, of Three Rivers, Mich.—*Improvement in Cultivators.*—Patent dated November 4, 1862.—In this machine the teeth are mounted in a frame pivoted in front, so that its rear end can be raised and lowered, which frame is also capable of sliding freely in its bearings in a lateral direction. The frames which carry the respective rows of teeth are combined in such a manner that by means of a lever they can both be adjusted simultaneously so as to work at either the same or at different depths. The stay chains, which sustain the lower part of the feet, are attached to the framework of the machine at a point in front of the hinges of the lifting frames, and in such relation thereto that the teeth have imparted to them in rising a slight backward movement in order to permit them to clear themselves readily from dirt, mud, &c. The tongue, driver's seat, and lifting frames are arranged in such relation to the axle that when the driver is in his seat the machine shall be balanced, or nearly so, upon its wheels.

Claim.—First, mounting the front feet in a frame having both a lateral and a vertical movement when arranged and operating substantially in the manner and for the purpose described.

Second, the combination of the front and rear lifting frames, to which the respective rows of teeth are attached, with a hand lever, substantially in the manner described for the purpose set forth.

Third, the combination of the stay chains with the frame and feet, when arranged in relation to the joints of the lifting frames, in the manner and for the purpose specified.

Fourth, the combination of the tongue, driver's seat, and front and rear lifting frames, when arranged in relation to the wheels, substantially as herein described, for the purpose of balancing the machine, as set forth.

No. 36,860.—J. D. ROBINSON, of Waterbury, Vt.—*Improved Clothes-wringing Machine.*—Patent dated November 4, 1862.—Behind the upper roller and in contact with it is an iron rod, which passes through the levers A and serves as a fulcrum to the same. On a circular projection in the frame rests an India-rubber cylinder, acting as spring to the lever. A screw passes through the long arm of the lever which serves to regulate the pressure of the upper upon the lower roller.

Claim.—The combination and arrangement of the lever A, the spring B, the screw C, the rod E, the leg N, the semicircular projection *k*, and the rubber spring H, constructed substantially as and for the purpose specified.

No. 36,861.—H. S. ROGERS, of Willow Vale, N. Y.—*Improvement in Revolving Fire-arms.*—Patent dated November 4, 1862.—This invention consists in effecting a connexion between the trigger and lever by means of a toggle joint for the purpose of obtaining a constantly increasing power upon the lever, and so as to counterbalance the increasing tension of the spring without requiring a corresponding increase in the force applied to the trigger.

Claim.—Combining the trigger with the lever A by means of a toggle E′ F′, applied and arranged to operate substantially as herein specified.

No. 36,862.—WILLIAM SEWELL, of New York, N. Y.—*Improvement in Steam Pumps.*—Patent dated November 4, 1862.—The crank shaft is arranged transversely to the piston rod

in bearings on the bed plate below and very near to the piston rod. The crank is arranged to work between the piston rod and on one side of the bed plate. The cross-head is secured to the piston rod, as shown at G, and is connected with the crank wrist by a connecting rod, so as to transmit rotary motion to the crank, and through it to the shaft and fly-wheel.

Claim.—The combined arrangement of the crank shaft, crank or cranks, cross-head and connecting rod or rods, substantially as and for the purpose herein specified.

No. 36,863.—WILLIAM SEWELL, of New York, N. Y.—*Improvement in Valves for Steam Pumps.*—Patent dated November 4, 1862.—In the side of the discharge chamber is an oblong opening of a size to allow the insertion and withdrawal of the valve, and along the exterior of the lower edge of this opening is a flange *c*. The margin of the flexible portion of the valve is fitted into a recess in the bottom of a block of metal corresponding in length and width with the flange *c*, the height or depth being greater than the oblong opening in the discharge chamber. The said block is furnished with tenons or dowels, which pass through and project below the flexible portion of the valve, so as to enter mortises provided in the flange *c* for their reception.

Claim.—First, so constructing and applying the valve that its flexible portion or hinge is held at a point or in a line outside of the chamber which contains the valve, substantially as and for the purpose herein specified.

Second, the combination of the block D, provided with dowels *d d*, or their equivalents, the flange *c*, and the cup E, the whole applied in combination with the valve C and the opening *b* in the valve chamber, substantially as and for the purpose herein set forth.

No. 36,864.—A. W. SMITH, of Manchester, N. H.—*Improvement in Fliers for Spinning.*—Patent dated November 4, 1862.—This invention consists in forming the parts composing the pressers, namely, the spring, the arm, and the delivery, of one and the same piece of steel wire, for the purpose of giving the presser arm sufficient elasticity to adapt itself to the head of the bobbin.

Claim.—First, the construction of a presser for head bobbins, by combining the spiral spring *a*, the arm *b*, and the hook *c*, of one and the same piece of steel wire, formed and arranged substantially as described, for the purposes herein set forth.

Second, also the combination of the arm, spring, and hook, whether in one or more pieces, when so arranged to give the hook or delivering finger the vertical play necessary to lay the yarn close to the nipper and lower heads of the bobbin, as set forth.

No. 36,865.—JOEL SMITH, jr., of Alleghany City, Pa.—*Improvement in Hinges for Shutters.*—Patent dated November 4, 1862.—The lever is provided with a weight at the lower end to keep its upper part in a perpendicular position, so that in opening the shutter the cam, which is placed on the female part of the hinge, will move the upper end of the lever sidewise and hold it in position.

Claim.—The arrangement of the cam *g* and eccentric lever *f*, when used in combination with the hinge, arranged, constructed, and operated substantially as herein described and for the purpose set forth.

No. 36,866.—J. J. STARR, of Cincinnati, Ohio.—*Improved Ice Clog.*—Patent dated November 4, 1862.—This invention is explained by the claim and engraving.

Claim.—As an improved article of manufacture, the ice clog composed of the roughened plate A, having oblique lips B B′ adapted to embrace the shoe sole just behind its widest part, and to receive straps D D′, which fasten over the instep, the whole being constructed and operating as described.

No. 36,867.—J. M. H. A. TAURINES, of Paris, France.—*Improvement in Spring Balances.*—Patent dated November 4, 1862.—Reference to the specification and drawings will be necessary for a description of this invention.

Claim.—First, the arrangement and method of constructing balance and weigh-bridges with elastic or spring-like connexions, substantially in manner hereinbefore described and illustrated in the accompanying drawings.

Second, the employment of suspension springs in pairs, in manner and for the purposes hereinbefore described and illustrated in the accompanying drawings.

Third, the employment of central springs H, for the purpose of enabling the platform to be loaded at any part for increasing the strength and acting as a regulator, all as hereinbefore described and illustrated in the accompanying drawings.

Fourth, the employment of a lever P, the end of which is free to move in a vertical direction, substantially in manner and for the purposes hereinbefore described and illustrated in the accompanying drawings.

No. 36,868.—E. A. STEVENS, of Hoboken, N. J.—*Improved Means of Protecting War Vessels.*—Patent dated November 4, 1862.—This invention consists in the employment of a sheathing of India-rubber upon the inside or outside of a vessel and placed upon the side, top, or bottom of chambers or vessels containing water employed as a protection against missiles.

Claim.—The use of a sheathing of gum-elastic or equivalent material applied internally or externally to the side, top, or bottom of a chamber or vessel containing water to be used for immersing ships or as a protection against projectiles.

No. 36,869.—E. A. STEVENS, of Hoboken, N. J.—*Improvement in Constructing and Arming of War Vessels.*—Patent dated November 4, 1862.—Inside of the upper part of the vessel is placed an inclined metallic armor to extend inward up from a point near the water-line at the sides of the vessel or from a lower deck of the vessel. By this means triangular spaces are left outside of the armor and between it and the sides of the vessel, which spaces are divided into water-tight compartments, and may also be filled with air-tight boxes or bags, in order to give an increased degree of buoyancy to the vessel. Outside of the vessel at or near the water-line is placed a solid mass of timber as an additional protection. Shot-proof loading-houses are so arranged and provided with ports, that one or more guns may be pointed to them and loaded by men or steam machinery protected within them.

Claim.—First, in combination with the means, substantially as described, of depressing and elevating a vessel for the purposes specified, inclined metallic armor so applied as to be rendered more fully effective by such depression of the vessel.

Second, inclined metallic armor in combination with the air vessels or compartments F or F′, substantially in the manner and for the purpose hereinbefore described.

Third, the constructing and arranging, substantially as herein described, of air compartments, for the purpose of giving buoyancy and stability to a war vessel, in combination with the means substantially as described of depressing and elevating the vessel.

Fourth, the additional structure G, constructed substantially as described, placed outside the sides of the vessels at or near the water-line, for the purpose of protecting the vessel.

Fifth, shot-proof loading-houses on war vessels, so arranged and employed, substantially as herein described, that cannon outside of them may be loaded from within them.

No. 36,870.—JOEL STONE, of Cleveland Ohio.—*Improved Windlass.*—Patent dated November 4, 1862.—Upon the shaft of the windlass and outside of the frame on both ends is a set of pulleys. In the middle of the drum is a ratchet and pawl. Upon the shaft of the windlass drum are two gear wheels, which run loosely and are connected with the drum by a pawl attached to the said wheels. In these cog gears work endless screws, which are placed at right angles to the shaft of the windlass, by actuating which the windlass is turned.

Claim.—The use of the two horizontal screws G G, constructing and actuating the windlass B, substantially as described, the windlass having at its extremities a succession of pulleys or grooves C, as set forth.

No. 36,871.—T. R. TIMBY, of Worcester, Mass.—*Improvement in Portable Warming Apparatus.*—Patent dated November 4, 1862.—This device consists in arranging one cylinder to be filled with hot water within an other cylinder in such a manner as to have a space between the two, which space, when a mild and gentle heat is desired, is filled with air, and when a greater heat is necessary, is filled with boiling water.

Claim.—The combination of the inner and outer cylindrical cases A C and flange *b b′*, with the openings *e e* and partition D, when arranged and operating in the manner substantially as described.

No. 36,872.—T. R. TIMBY, of Worcester, Mass.—*Improvement in Mercurial Barometers.*—Patent dated November 4, 1862.—The barometer is so constructed as to provide for the shutting up of the mercury within the tube, in order to render it portable, and permit the expansion of the mercury so shut up, and guard against the breaking of the tube.

The cover of the cistern is made of India-rubber or other elastic material combined with the tube that contains the mercury, and is provided with a nozzle for the admission of air above the surface of the mercury in the cistern, such nozzle having fitted to it a short glass tube to keep it open, and permit the tying over it of a piece of silk or leather, for the purpose of preventing the tube from being broken at its connexion with the cistern.

Claim.—The tube G arranged in line with and below the tube F, containing the column of mercury, and combined therewith by means of the interposed elastic bottom of the cistern, in such manner as to constitute an expansion chamber in which a portion of the said bottom is capable of expanding, substantially as and for the purpose herein specified.

Also, making the cistern with a cover of India-rubber or other elastic material combined with the tub F and fitted with a tube *d* of glass or other hard material, substantially as and for the purpose herein specified.

No. 36,873.—W. H. TRISSLER, of Burr Oak, Mich.—*Improved Stove Blacking or Polish.*—Patent dated November 4, 1862.—The nature of this invention is explained by the claim.

Claim.—The combination of plumbago, or plumbago and German black-lead, with calcined plaster of Paris and alum, substantially in the manner and for the purposes herein set forth.

No. 36,874.—ASAHEL WHEELER, of Newton, Mass.—*Improved Copal Varnish.*—Patent dated November 4, 1862.—The nature of this invention is explained by the claim.

Claim.—As a new or improved varnish the composition of copal, alcohol and fusil oil, combined substantially in the proportions and mannor as hereinbefore set forth.

No. 36,875.—JAMES WHITAKER, of Philadelphia, Pa.—*Improvement in the Take-up Motion for Power Looms.*—Patent dated November 4, 1862.—This invention consists in combining with the ratchet wheel and pawls of a take-up motion for power looms any convenient number of detachable pins, or their equivalents, acted upon by an additional pawl, so that the amount of the take-up of the fabric may be readily altered at pleasure, and the number of threads to the inch of the fabric may be increased or diminished without the necessity of resorting to the usual tedious plan of changing the train of gearing, by which motion is communicated from the ratchet wheel to the take-up roller.

Claim.—In combination with the ratchet wheel and pawls of a take-up motion for power looms any convenient number of detachable pins *x*, or their equivalents, acted upon by an additional pawl, or its equivalent, substantially as set forth and for the purpose specified.

No. 36,876.—WILLIAM YAPP, of Cleveland, Ohio.—*Improved Mode of Sustaining Gutters to Buildings.*—Patent dated November 4, 1862.—This invention consists in providing the gutter with tubes placed at equal distances upon and at angles to the same, so as to admit of their being slipped over bracket bolts screwed into the wall, and fastened to the said bolts by means of springs or pins.

Claim.—The bracket bolt B and tube A, the latter passing through the gutter and closed at its outer end, in combination with the within described fastening for attaching the gutter to the house by the bolt alone, substantially as specified.

No. 36,877.—T. B. DE FOREST, of Birmingham, Conn., assignor to THE SHELTON AND OSBORN SKIRT COMPANY and L. and C. H. DE FOREST, of the same place.—*Improvement in Apparatus for Attaching Clasps to Hooped Skirts.*—Patent dated November 4, 1862.—The nature and object of this invention will be understood from the claim and engraving.

Claim.—The employment of a hopper or shaking table, in combination with a guide plate K, or its equivalent, for guiding the clasps on their backs to the feeder or conductor, substantially as hereinbefore described.

Also, the employment of a feeder I or conductor, so constructed as to receive the clasps on their backs, and reverse their position as they pass down or through it, substantially as and for the purpose set forth.

Also, the moving punch D, in combination with the finger *d*, or its equivalent, and the feeder, the whole so arranged that the punch cuts off one clasp at a time and forms a stop to the feed, substantially as hereinbefore explained.

Also, the combination of the moving punch or set D and its clasp-retaining device *d*, with the work-supporting die *a*, substantially as described, whereby the clasps are carried to the work and inserted and secured therein, as hereinbefore set forth.

No. 36,878.—J. H. BUTTERWORTH, of Dover, N. J., assignor to Himself and HENRY MCFARLAN, of the same place.—*Improvement in Machines for Making Brace Jaws for Steam Boilers.*—Patent dated November 4, 1862.—The machine is composed of bending mechanism, and forming dies and mandrels, so combined and arranged as to take a straight bar of iron, and in three consecutive operations bring it to the form required for the jaws of iron braces for steam boilers.

Claim.—First, the combination of the two plungers D and E and their respective rollers *a a* and *f f*, arranged and operating as described, to bring the bar from the condition shown in figure 6 to that shown in figures 8 and 9.

Second, the combination of the dies G G H and I and the mandrels *m* and *n*, the whole arranged and operating substantially as and for the purpose herein specified.

Third, constructing the mandrel *n* in a forked form to allow the passage of the mandrel *m* through it, substantially as herein described.

Fourth, the combination of the plungers D E, rollers *a a f f*, dies G G H I, and mandrels *m n*, the whole arranged to operate substantially as herein specified.

No. 36,879.—J. N. BIRD, of Trenton, N. J., assignor to H. H. DAY, of New York, N.Y.—*Improvement in India-rubber Wads for Projectiles.*—Patent dated November 4, 1862.—This invention consists in making a wad of cylindrical form, with one of its ends concave, of India-rubber, so as to act as an elastice cushion between the projectile and the pressure of the gases when the powder is exploded, for the purpose of preventing windage, and which will admit of being forced into the grooves of the breech of the projectile.

Claim.—A vulcanized India-rubber wad for ordnance and small arms, applied and operating substantially in the manner and for the purpose described.

No. 36,880.—JAMES DILLON, of Lynn, Mass., assignor to Himself and J. B. NICHOLS, of the same place.—*Improved Channelling Tool for Soles.*—Patent dated November 4, 1862.—Upon the end of the shank of the tool is a tubular cutter und a right angular seat cutter, the

latter having two cutting edges at right angles to each other and arranged in relation to the cutting edge of the tubular cutter in such a manner as to form the channel not only with a groove and a flap or cover thereto, but with a right angular seat for the reception and support of the edges of the flap, thus making the said edge a square edge instead of a sharp one.

Claim.—The channelling tool as made with the tubular and angular cutters B C, arranged substantially in manner and so as to operate as specified.

No. 36,881.—P. W. GATES, of Chicago, Ill., assignor to Himself, THOMAS CHALMERS and D. R. FRASER, of the same place.—*Improvement in Evaporating Pans for Saccharine Liquids.*—Patent dated November 4, 1862.—A steam coil apparatus is so constructed that when applied to a pan with a rectangular bottom, a defecating apartment at one end of the pan will be formed, and thus the necessity of widening the bottom of the pan near one end for that purpose is obviated.

Claim.—The steam coil evaporator with the defocating apartment C, substantially in the manner and for the purpose described.

No. 36,882.—T. D. LAKIN, of Hancock, N. H., assignor to Himself and CHARLES WILDER, of Peterborough, N. H.—*Improvement in Ox Yokes.*—Patent dated November 4, 1862.—The body of the yoke is provided with grooves, one in each end and on its under side, which form guides for the slides. These slides are retained by tubular thimbles which screw into the same, and the upper ends of which pass through slots in the bar. Flanges upon the upper ends of the thimbles prevent the slide from falling out.

In combination with the staple that supports the draught pole are two stirrups placed at right angles to each other, the staple being provided with three or more recesses in such manner that by means of the stirrups the staple can be fastened in whatever position it may be brought.

Claim.—First, the arrangement of the hollow thimbles C made to receive the bows, and provided with flanged heads *c*, in combination with the slides B B′ and slotted bar A, substantially as and for the purpose specified.

Second, the stirrups E F arranged at right angles to each other, and applied in combination with the semicircular seat *h*, staple G, and recesses *j*, as and for the purpose set forth.

No. 36,883.—J. F. TOWNSEND, of Westfield, N. Y., assignor to Himself and P. P. PRATT, of Buffalo, N. Y.—*Improvement in Butt Hinges.*—Patent dated November 4, 1862.—The object of this invention is to produce a loose jointed door hinge which can be easily adapted to either a right or left hand door, one part being formed with a leaf projecting from the centre of the cylindrical portion in which the pin is set, and the other part, consisting of a longer leaf projecting tangentially from the cylindrical portion or sufficiently to one side of the centre to admit of its closing fully together with the opposite portion.

Claim.—As a new article of manufacture, a hinge composed of the two parts A and B, arranged and operating substantially as specified.

No. 36,884.—EDWIN ALLEN, of Newark, N. J.—*A Carriage or Movable Bed for Forming and Planing Machines.*—Patent dated November 11, 1862.—This invention relates to a method of constructing movable beds or carriages, on which wood or metal is placed to be shaped or otherwise operated upon, so that it can freely and easily move in any direction, and at the same time be perfectly solid and steady.

Claim.—The movable carriage, when constructed and operated by the jointed levers, in the manner and for the purpose herein above specified.

No. 36,885.—W. D. ANDREWS, of New York, N. Y.—*Improvement in Oscillating Steam Engines.*—Patent dated November 11, 1862.—The nature of this invention is mainly explained by the claim. Springs are applied to the trunnion boxes, and in such relation to an arc-formed valve face and seat, arranged lengthwise of the cylinder, as to permit the trunnion boxes to adjust themselves to the expansion of the cylinder valve and seat whenever desirable.

Claim.—First, the construction of the valve face on the cylinder in the form of an arc of such radius extending the whole length of the cylinder concentric with the axis of oscillation thereof that if continued to a complete circle it would circumscribe the whole cylinder, thereby not only obtaining the greatest practicable length of valve face, but allowing the said face to be turned in a lathe while centred therein for turning the trunnions, substantially as herein described.

Second, the springs E, applied in combination with the trunnion boxes and in relation to an arc-formed valve face and seat, arranged lengthwise of the cylinder, substantially as and for the purpose herein specified.

No. 36,886.—E. G. F. ARNDT and AUGUSTUS HÜHNE, of Rondout, N. Y.—*Improvement in Locks.*—Patent dated November 11, 1862.—The case and lock of the bolt are so constructed that the lock may be applied to a right or left hand door. To the bolt is secured a pair of vibrating tumblers, one of which has a spring which tends to force the tumblers towards each other. To the hub is attached a coiled spring, which tends to keep it in such position

that its studs will be in a line at right angles to that of the bolt. The bolt may be held in a locked position, so that it cannot be moved by a key, by means of a guard plate, which will prevent the button from being moved and consequently hold the bolt.

Claim.—First, the arrangement of the tumblers *f f* in their relation to the bolt and to the hub, so that the hub shall bear the thrust of the bolt when pressure is made at the outer end of it, as set forth.

Second, the spring *n* as it is attached to and operates upon the hub, as described.

Third, the guard plate *t*, in combination with the button *k* and tumblers *f f*, as herein recited.

No. 36,887.—JOEL ARNOLD, of Elmira, N. Y.—*Improvement in Stump Machines.*—Patent dated November 11, 1862.—This invention consists in making the windlass, by which the resistance is overcome, of two or more sections of different diameters, on either of which the chain is secured and wound, and having arranged in connexion therewith a sliding hook, which may be adjusted to any position opposite either section, to which hook the opposite end of the chain may be attached, so that the two ends of the chain shall be in the same line, and so that the draught of the chain shall be equable and regular. Passing through the side of the frame is a sliding detent engaging with ratchets on the side of the driving wheel of the windlass, and operated by a suitable spring which may be raised for the purpose of removing or drawing out the detent.

Claim.—First, the windlass C, having two or more sections *a b c* of increasing diameters, in combination with the sliding and adjusting hook M and chain K, in such a manner that the device is adapted to overcome different degrees of resistance by shifting the position of the chain with economy of labor and time, substantially as herein set forth.

Second, in combination with the cog-wheel D provided with lateral ratches *h h*, also the detent N, spring P, and stop pin *m*, arranged substantially as and for the purposes herein specified.

No. 36,888.—G. W. BILLINGS, of St. Paul, Minn.—*Improvement in Rotary Forcing Pumps.*—Patent dated November 11, 1862.—Within a stationary hollow cylinder is a revolving eccentric cam wheel, attached to which and to the cut-off is a follower, and attached to the follower and forming a part of it is a stop, which acts as a valve to close one of the ports when the other port is brought opposite to it in the revolution of the cam, thus preventing the escape of the fluid and effecting a saving of power.

Claim.—The eccentric revolving cam wheel B B′, in combination with the stationary cylinder A A′, and with the adjustable cut-off F F′, constructed and operating as represented in Fig. 3, also the stop G G′, in combination with the cut-off F F and the eccentric and connecting rod D *d* and cam wheel B B, all operating in the manner and for the purposes substantially as set forth.

No. 36,889.—A. M. BLACK, of Auburn, Ill.—*Improvement in Cultivators.*—Patent dated November 11, 1862.—The rock-shaft is fitted transversely in the front part of the frame, and has the bars fitted to it which carry the ploughs. The rear end of these bars are connected by a cross-bar. To the rock-shaft is secured the front end of an arm or lever extending to the rear of the machine. Secured to this arm is a lever, by means of which the ploughs may be raised or lowered by the driver to conform to the inequalities of the surface.

Claim.—The rock-shaft D, with the plough bars or beams E E attached to it, as shown, and connected at their back ends by the cross-bar F, in combination with the arm G and the lever I, the latter being provided with the arm J fitted between cleats or projections *d d* on bar F, all arranged substantially as and for the purpose herein set forth.

No. 36,890.—J. H. BLOOMFIELD, of Chicago, Ill.—*Improved Furniture Caster.*—Patent dated November 11, 1862.—The cup or socket which contains the ball is provided with points or supports, three of which are arranged upon the same horizontal plane at equal distances from each other, and one in the apex of the cup or socket.

Claim.—The peculiar arrangement of the three points *c*, in combination with the point *a*, when the same are used in combination with the cup and ball of a furniture caster, all being constructed, arranged, and operating substantially as and for the purposes delineated and set forth.

No. 36,891.—SEYMOUR BOSTWICK and C. G. SARGENT, of Graniteville, Mass.—*Improvement in Breech-loading Fire-arms.*—Patent dated November 11, 1862.—This invention consists in the employment of a bent spring for the purpose of throwing up the breech piece to receive the charge when it is returned into proper position for firing the gun and then locked against any recoil.

The pivot of the breech piece is in an oblong hole, so as to allow the same to move back and forth as well as up or down. The locking lever has a cam upon its front end, which holds the breech piece tightly against the barrel when closed.

Claim.—First, in combination with a breech piece pivoted by a longitudinal slot, a bent spring G that will, when the breech piece is released, first run it back, and then throw it up, substantially in the manner and for the purpose described.

Also, the arrangement of the breech piece, locking-lever and trigger, when pivoted or yielding, as described, and controlled by their respective springs, as herein set forth, so that a simple touch of the trigger E allows the breech piece to be thrown up into loading position.

No. 36,892.—H. H. CHRISTIE, of Perch River, N. Y.—*Improved Drag and Cultivator Combined.*—Patent dated November 11, 1862.—This device consists of a reversible frame provided on one side with sharp square-pointed teeth, and on the other with curved flat teeth acting as shares, so that it can be used either as a harrow or a cultivator.

Claim.—The reversible frame A provided with the teeth C, one end being pointed and the other curved, constructed and operating as and for the purposes set forth.

No. 36,893.—EDWIN CLARK, of Lancaster, Pa.—*Improvement in Grinding Mills.*—Patent dated November 11, 1862.—This invention consists in combining with the tube and the disk, or its equivalent, a vertical shaft that passes up through the tube into the hopper for the purpose of facilitating the feeding of grain, &c., from the hopper through the tube to the disk.

Claim.—The combination of the disk, tube and vertical shaft, when said shaft passes through both the tube and the hopper, and stirs or loosens the grain or middlings for the purpose of facilitating the feeding of grain or middlings to the stones or buhrs to be ground, substantially as described.

No. 36,894.—G. M. CLEMENTS, of Kenduskeag, Maine.—*Improvement in Cultivators.*—Patent dated November 11, 1862.—The frame of this device is composed of three bars *a a a′*, the central one of which is hinged or jointed at its front end to a rod, the two others being also hinged to the same rod, and the three are connected by transverse rods fitted with screw-threads and nuts, by which means the bars may be securely adjusted nearer to or further from each other.

To the outer side of each of the said bars are attached curved bars E′ extending downwards and terminating in forks in which rollers are placed.

Claim.—The frame A connected with the draught pole D, as described and composed of three bars *a a a′* connected together by the rods *d d*, and arranged as shown, so that the bars *a a* may be adjusted nearer together or further apart as desired; in combination with the shares F F and adjustable rollers *l l*, all arranged substantially as and for the purpose herein set forth.

No. 36,895.—D. C. COLBY, of Claremont, N. H.—*Improvement in Cultivators.*—Patent dated November 11, 1862.—This invention consists in the employment of two toothed rollers which diverge from front to rear, and are caused to rotate as the machine moves along. At each side of the front ends of these rollers and attached to stirrups depending from the draught beam are two rotating toothed wheels. Attached to the draught beam near the front ends of the toothed rollers and between the same is an adjustable ploughshare.

Claim.—First, the arrangement and combination of the rollers E E, the wheels F F, and the stirrups D D, substantially as described and for the purposes set forth.

Second, the arrangement of the plough H with relation to the front teeth of the rollers E E, in the manner and for the purposes set forth.

No. 36,896.—A. C. CURRIER, of Hallowell, Maine.—*Improved Shot-proof Dome or Cupola.*—Patent dated November 11, 1862.—The nature of this invention will be understood by the claim and engraving.

Claim.—A shot-proof dome, substantially as and for the purposes described.

Second, also, in combination with a dome of this character, the arrangement of rubber, boards, felt, tan, sawdust, or, in the place of either, other like material or materials for preventing the reverberation and mitigating the effect of sound, substantially as and for the purposes described.

Third, also the bar for closing the port-hole and the arrangement of the same, substantially as and for the purposes described.

Fourth, also the open floor for such dome, substantially as and for the purposes described.

Fifth, also, in combination with the foregoing, the arrangement of cylinders or other form of receptacle, to aid in supplying the dome with air from without, substantially as and for the purposes described.

Sixth, also the arrangement of rubber or other like material between the dome and sides of the vessel to keep out water, substantially as and for the purposes described.

Seventh, also the arrangement of raising the dome to throw out any substances which might impede its working or rotation through friction at the point of intersection with the top of the bulwark, substantially as and for the purposes described.

Eighth, also each and all of the several modes of fastening; first, by flanges on the inner side of the ribs or plates and bolts across; second, the bevelling of the plates, the one inward and the adjoining one outward, at an angle more or less obtuse; and, third, the making of the edges of said plates or ribs, the one concave and the adjoining one convex, on a circle smaller or greater to fit into each other, each substantially as and for the purposes described.

Ninth, also the arrangement of raising the dome by a screw, or its equivalent, into the capstan head of which is set the foot of the central shaft of the dome, substantially as and for the purposes described.

No. 36,897.—G. H. DALEY and R. M. TREAT, of Morris, Conn.—*Improvement in Horse Rakes.*—Patent dated November 11, 1862.—This invention relates to a friction brake for horse hay rakes, which consists of a transverse bar, block, springs, and connecting rods operating in connexion with a rake head and the wheels of the machine, in such a manner that the driver by pressing his foot upon the lever frame produces frictional contact between the wheels and the brake blocks, so that the rake teeth will be elevated and emptied.

Claim.—The combination and arrangement of the lever frame *m m' m'*, brackets *n n*, link connecting rods *o o*, and brake D D' D', with a horse hay rake mounted upon wheels, and having a driver's seat, substantially in the manner and for the purposes described.

No. 36,898.—JOHN DAVIS, of Alleghany City, Pa.—*Improvement in Seed-Sowing Harrows.*—Patent dated November 11, 1862.—Within the diverging bars of a harrow frame are placed seed rollers, furnished with a number of spiral grooves of different depths and sizes. Over these rollers is placed a case or sheath furnished with a spiral opening, corresponding to the grooves in the said rollers, for the purpose of covering all the grooves except the one desired for use in sowing. The bottom of the seed chamber is inclined so that the seed will fall towards the roller.

Claim.—The rollers *p* and sheath B, constructed and operated substantially as described, and used in combination with the seed chambers *s*, furnished with the inclined bottom, as herein represented and for the purpose set forth.

No. 36,899.—MILTON FINKLE, of New York, N. Y.—*Improvement in Sewing Machines.*—Patent dated November 11, 1862.—This invention relates to the driving of a spool or bobbin winder without a band by the friction of a pulley or roll attached to the spindle of the spooler, and bearing against the fly wheel or other wheel or pulley of the sewing machine, and it consists in a method of applying the spooler or winder to the sewing machine, which provides for its proper adjustment relatively to the wheel or pulley by which it is driven.

Claim.—The arrangement of the spooler or bobbin winder to swing, and also to move longitudinally on a fixed pin attached to the sewing machine, and occupying a position parallel with the shaft of the machine by which the spooler or winder is driven, substantially as described.

No. 36,900.—IRA DUNHAM, of Plattsburg, Mo.—*Improvement in Saddles.*—Patent dated November 11, 1862.—The tree of the saddle is provided with a recess for the reception of a seat formed of India-rubber fitting closely in the recess, which is kept securely in its place by a projection at its lower surface, fitting in an opening or slot for the purpose.

Claim.—The employment or use of an India-rubber seat B, provided with a downward projection *d*, in combination with the saddletree A, which is furnished with a recess *a* to receive the projection *d*, substantially as and for the purpose shown and described.

No. 36,901.—W. H. DOANE and W. E. LONDON, of Cincinnati, Ohio.—*Improvement in Combined Planing and Matching Machins.*—Patent dated November 11, 1862.—This invention relates to a method of attaching the tonguing, grooving, or matching works of a planing machine to a sliding bed or ways, so that they can be instantly removed out of the way below the top of the bed upon which the planing tools operate, and that the same machine can be used for planing either wide or narrow lumber without delay in the operation, and also for tonguing, grooving and matching, and planing at one time.

Claim.—First, in a combined planing and tonguing and grooving or matching machine, so attaching the tonguing and grooving or matching works that they may be adjusted to a position above or below the top of the planing bed, substantially in the manner and for the purpose described.

Second, in a combined planing and tonguing and grooving or matching machine, the sliding frame or bed D with matching works mounted upon it, and operated by the gearing P P O O Q Q and N, so as to raise or lower the matching works above or below the top of the planing bed, all constructed and arranged substantially in the manner and for the purpose described.

Third, in a combined planing and matching machine, the arrangement of the screw shaft *v'*, sliding bed D, with matching works C C mounted upon it, and the aperture *w* in the closed frame A, substantially in the manner and for the purpose described.

Fourth, the arrangement of the sliding guard-foot L and its spring *p*, substantially in the manner and for the purpose described.

Fifth, the combination of the lower feed roller B' and its boxes *a*, with dovetail slots *b* in them, with the dovetail-headed screw bolts *d* and their nuts *e*, the whole arranged and operating substantially as and for the purpose described.

Sixth, the arrangement of the checking geared lever segments I I, constructed as described, in combination with a system of expansion gearing for feed rollers of a planing machine, substantially as and for the purposes described.

No. 36,902.—CONSTANT GENTIL, of New York, N. Y.—*Improved Spring Bed.*—Patent dated November 11, 1862.—This invention consists in the combination of a series of India-rubber rings with a cord or cords so interlaced as to form with the said rubber rings an elastic network, as shown in the engraving.

Claim.—The combination and arrangement of the India-rubber rings B and interlaced cord or cords D, substantially as and for the purpose above set forth.

No. 36,903.—W. S. HADLEY, of Norwalk, Ohio.—*Improved Guide Attachment for Taps, Reamers, &c.*—Patent dated November 11, 1862.—This device consists of a bell-shaped case provided with a tubular socket at its smaller end, through which and the case the tap or other tool passes. In connexion with the case is a spring, so arranged in relation to the tool and case that the latter will, as the tool is turned and commences its work, firmly adhere to the surface of the article being tapped, reamed, or bored, and serve as a guide for the tool, so that the latter will work perfectly true and without special care on the part of the operator.

Claim.—The case A, provided with the tube B, in combination with a spring D and collar or stop E, applied to a tap or analogous tool, substantially as and for the purpose herein set forth.

No. 36,904.—S. H. HAMILTON and C. A. ASHTON, of Jacksonville, Ill.—*Improved Ice-cream Freezer.*—Patent dated November 11, 1862.—This invention consists in the employment, in connexion with rotary scrapers and beaters, of a rotary cream receptacle operated by means of gearing arranged in such a manner that the cream receptacle will rotate in a reverse direction to the scrapers and beaters, and with a different rate of speed, the parts being so arranged that the beaters and scrapers, either or both, may be rendered inoperative as circumstances may require.

Claim.—The combination of the rotary cream receptacle C and the rotary beaters L L' and frame M, the latter being placed loosely on the shaft I, and connected to it by a bolt *a** and the cream receptacle C and shaft I, rotated from the driving shaft G by gearing arranged as set forth.

No. 36,905.—S. R. HAWKINS, of Beallsville, Pa.—*Improved Portable and Convertible Sheep Rack.*—Patent dated November 11, 1862.—This invention consists of a jointed folding rack provided with adjustable grain troughs and with hinged lids, or covers, supported by slide bars, so arranged as to serve to feed the sheep with hay or grain, as a shearing bench and as a dry receptacle for hay or wool. It may also serve as a fence for enclosing stacks, and affords facilities for small sheep-feeding without being crowded by large sheep, and separates the wasting hay from the seed.

Claim.—First, a sectional, folding, and convertible sheep rack, constructed substantially as and for the purposes herein described.

Second, the combination of the hinged front of the troughs and the hay rack, substantially as and for the purpose described.

Third, the combination of the hinged lids, sliding supports and sectional rack, substantially as and for the purpose described.

Fourth, the combination of the vertical division grating *c c*, slatted hay rack *j j*, and sectional box A A, substantially as and for the purposes described.

No. 36,906.—T. N. HOSMER, of Todd's Valley, Cal.—*Improvement in Spirit Levels.*—Patent dated November 11, 1862.—The nature and object of this invention are explained by the claim.

Claim.—The securing of the glass spirit or vials of spirit levels, plumbs, grading implements, &c., in their stocks or blocks, by having the boxes in which said bulbs or vials are placed fitted in recesses in the stocks or blocks on a hinge, screw or pivot, and adjusted and secured in proper position by a screw, substantially as herein set forth.

No. 36,907.—HUGH KERR, of Brooklyn, N. Y.—*Improved Tap for Tapping Pipes.*—Patent dated November 11, 1862.—This invention consists in having the cutter of the tap made separately from the shank or stock, and having the former fitted in the latter in such a manner that the cutter may be readily detached from the shank and also firmly secured in the same, the object being to adapt the tap to cutters of different sizes, so that the holes of different sizes may have screw threads cut in them by simply inserting the proper sized cutter in the shank.

Claim.—The mode of securing the cutter B in the shank or stock A, as shown and described, by having an opening *b* made transversely through the outer part of the shank or stock A, and extending out at each end flush with the front end of the shank or stock, and providing the cutter B with a recess *s* to receive the part *c* of the shank or stock, in combination with the key C, substantially as set forth.

No. 36,908.—NEIL MACNEALE and W. B. DODDS, of Cincinnati, Ohio.—*Improvement in Locks.*—Patent dated November 11, 1862.—The nature of this invention will be learned from the claim.

Claim.—First, the combination of two series of concentric rings of corresponding diameters, one behind the other, the one series provided with gates for the passage of the stump, and the

No. 36,897.—G. H. DALEY and R. M. TREAT, of Morris, Conn.—*Improvement in Horse Rakes.*—Patent dated November 11, 1862.—This invention relates to a friction brake for horse hay rakes, which consists of a transverse bar, block, springs, and connecting rods operating in connexion with a rake head and the wheels of the machine, in such a manner that the driver by pressing his foot upon the lever frame produces frictional contact between the wheels and the brake blocks, so that the rake teeth will be elevated and emptied.

Claim.—The combination and arrangement of the lever frame *m m' m'*, brackets *n n*, link connecting rods *o o*, and brake D D' D', with a horse hay rake mounted upon wheels, and having a driver's seat, substantially in the manner and for the purposes described.

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Claim.—The rollers *p* and sheath B, constructed and operated substantially as described, and used in combination with the seed chambers *s*, furnished with the inclined bottom, as herein represented and for the purpose set forth.

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Claim.—The arrangement of the spooler or bobbin winder to swing, and also to move longitudinally on a fixed pin attached to the sewing machine, and occupying a position parallel with the shaft of the machine by which the spooler or winder is driven, substantially as described.

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Claim.—The employment or use of an India-rubber seat B, provided with a downward projection *d*, in combination with the saddletree A, which is furnished with a recess *a* to receive the projection *d*, substantially as and for the purpose shown and described.

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Claim.—First, in a combined planing and tonguing and grooving or matching machine, so attaching the tonguing and grooving or matching works that they may be adjusted to a position above or below the top of the planing bed, substantially in the manner and for the purpose described.

Second, in a combined planing and tonguing and grooving or matching machine, the sliding frame or bed D with matching works mounted upon it, and operated by the gearing P P O O Q Q and N, so as to raise or lower the matching works above or below the top of the planing bed, all constructed and arranged substantially in the manner and for the purpose described.

Third, in a combined planing and matching machine, the arrangement of the screw shaft *v'*, sliding bed D, with matching works C C mounted upon it, and the aperture *w* in the closed frame A, substantially in the manner and for the purpose described.

Fourth, the arrangement of the sliding guard-foot L and its spring *p*, substantially in the manner and for the purpose described.

Fifth, the combination of the lower feed roller B' and its boxes *a*, with dovetail slots *b* in them, with the dovetail-headed screw bolts *d* and their nuts *e*, the whole arranged and operating substantially as and for the purpose described.

Sixth, the arrangement of the checking geared lever segments I I, constructed as described, in combination with a system of expansion gearing for feed rollers of a planing machine, substantially as and for the purposes described.

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Claim.—The combination and arrangement of the India-rubber rings B and interlaced cord or cords D, substantially as and for the purpose above set forth.

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Claim.—The case A, provided with the tube B, in combination with a spring D and collar or stop E, applied to a tap or analogous tool, substantially as and for the purpose herein set forth.

No. 36,904.—S. H. HAMILTON and C. A. ASHTON, of Jacksonville, Ill.—*Improved Ice-cream Freezer.*—Patent dated November 11, 1862.—This invention consists in the employment, in connexion with rotary scrapers and beaters, of a rotary cream receptacle operated by means of gearing arranged in such a manner that the cream receptacle will rotate in a reverse direction to the scrapers and beaters, and with a different rate of speed, the parts being so arranged that the beaters and scrapers, either or both, may be rendered inoperative as circumstances may require.

Claim.—The combination of the rotary cream receptacle C and the rotary beaters L L' and frame M, the latter being placed loosely on the shaft I, and connected to it by a bolt *a** and the cream receptacle C and shaft I, rotated from the driving shaft G by gearing arranged as set forth.

No. 36,905.—S. R. HAWKINS, of Beallsville, Pa.—*Improved Portable and Convertible Sheep Rack.*—Patent dated November 11, 1862.—This invention consists of a jointed folding rack provided with adjustable grain troughs and with hinged lids, or covers, supported by slide bars, so arranged as to serve to feed the sheep with hay or grain, as a shearing bench and as a dry receptacle for hay or wool. It may also serve as a fence for enclosing stacks, and affords facilities for small sheep-feeding without being crowded by large sheep, and separates the wasting hay from the seed.

Claim.—First, a sectional, folding, and convertible sheep rack, constructed substantially as and for the purposes herein described.

Second, the combination of the hinged front of the troughs and the hay rack, substantially as and for the purpose described.

Third, the combination of the hinged lids, sliding supports and sectional rack, substantially as and for the purpose described.

Fourth, the combination of the vertical division grating *c c*, slatted hay rack *j j*, and sectional box A A, substantially as and for the purposes described.

No. 36,906.—T. N. HOSMER, of Todd's Valley, Cal.—*Improvement in Spirit Levels.*—Patent dated November 11, 1862.—The nature and object of this invention are explained by the claim.

Claim.—The securing of the glass spirit or vials of spirit levels, plumbs, grading implements, &c., in their stocks or blocks, by having the boxes in which said bulbs or vials are placed fitted in recesses in the stocks or blocks on a hinge, screw or pivot, and adjusted and secured in proper position by a screw, substantially as herein set forth.

No. 36,907.—HUGH KERR, of Brooklyn, N. Y.—*Improved Tap for Tapping Pipes.*—Patent dated November 11, 1862.—This invention consists in having the cutter of the tap made separately from the shank or stock, and having the former fitted in the latter in such a manner that the cutter may be readily detached from the shank and also firmly secured in the same, the object being to adapt the tap to cutters of different sizes, so that the holes of different sizes may have screw threads cut in them by simply inserting the proper sized cutter in the shank.

Claim.—The mode of securing the cutter B in the shank or stock A, as shown and described, by having an opening *b* made transversely through the outer part of the shank or stock A, and extending out at each end flush with the front end of the shank or stock, and providing the cutter B with a recess *c* to receive the part *c* of the shank or stock, in combination with the key C, substantially as set forth.

No. 36,908.—NEIL MACNEALE and W. B. DODDS, of Cincinnati, Ohio.—*Improvement in Locks.*—Patent dated November 11, 1862.—The nature of this invention will be learned from the claim.

Claim.—First, the combination of two series of concentric rings of corresponding diameters, one behind the other, the one series provided with gates for the passage of the stump, and the

other with radial talons to impart rotation from one to another of the eccentric rings, the corresponding rings of the two series being connected together in any relative position desired, by notches and tongues substantially as described.

Second, the plate F, formed with a radial channel for the passage of the stump, and with concentric slots for the reception and guidance of the rings above referred to, when the said plate is fitted in a lock case A, of the construction described, and held between a shoulder *a'* and cap B, substantially as set forth.

Third, the combination of the dog L, fixed stump O, and sliding stump K, constructed substantially as described and employed to transfer pressure against any of the rings to a single fixed bearing.

Fourth, the loose longitudinally sliding or racking stump K, constructed and operating as herein shown and described.

Fifth, the dog L, formed with an oblique tooth *l''*, to elevate it completely clear of the racking stump K, by backward pressure upon the bolt, substantially as explained.

Sixth, a stud plate or equivalent device, operating in any manner, substantially as described, to limit the forward motion of the sliding stump K, and thus permit the descent of the dog into a suitable position to engage with the said stump at the next backward motion.

Seventh, the combination of the hub C, spud *c* and shaft D, constructed and connected substantially as described, so as to prevent injury to the working parts of the lock by hammering or other violence on the exterior.

Eighth, the notch *m*, or equivalent device, employed to permit a certain limited play of the shaft D, in relation to the inner talon J, of the ring I, substantially as explained, in order to compensate for the thickness of the talons.

Ninth, the stub *b2*, and notch *b*, employed in any manner, substantially as described, to prevent the removal of the cap B, while the bolt is retracted.

No. 36,909.—JOSEPH MEYER, of Linden Hall, Pa.—*Improvement in Cultivator Ploughs.*—Patent dated November 11, 1862.—This invention relates to the particular arrangement of parts for the purpose of adapting the cultivator plough to a variety of agricultural purposes, by which it may be adjusted both as to height and depth, as well as to width and draught.

Claim.—The cultivator plough, constructed, arranged, made capable of adjustment as to height, depth, width and draught, and operating in the manner and for the purpose herein set forth.

No. 36,910.—J. H. MCGUIRE, of Rochester, N. Y.—*Improvement in Skates.*—Patent dated November 11, 1862.—The nature of this invention will be understood from the claim and engraving, the object being to attach the skate securely to the foot without the use of straps, and also to give a degree of elasticity to the forward bearing which supports the ball of the foot, the posts or bearings between the foot piece and runner being dispensed with.

Claim.—The elastic support B, for the front of the foot, formed by bending the steel bar backward over the runner, and the rigid support E, for the heels, formed by bending the bar back acutely, and then raising it vertically, when the said supports are disconnected and independent, except through the runner, the whole operating substantially as herein set forth.

Also, securing the skate to the foot at the rear, by means of the heel piece K, provided with the broad tongue *h*, resting in the corresponding slot *f* of the heel plate, and at the front by means of the screw *l*, and nut piece *m*, the whole arranged and operating substantially as herein set forth.

No. 36,911.—S. M. PARSE, of Newark, N. J.—*Improvement in Elbow Joint Bands.*—Patent dated November 11, 1862.—This invention consists in the employment of a band of metal shaped to fit the inner and outer angles of the elbow at the joint, the entrance of points into the sharp inner angle holding them secure, and an extension piece in the outer angle of the band being riveted to the inner angles of the pipe.

Claim.—A joint band, when constructed in the manner and for the purpose herein above specified and shown.

No. 36,912.—JACOB PATTERSON, of Monroe, N. Y.—*Improvement in Pistons for Pumps.*—Patent dated November 11, 1862.—Fitted upon a hollow cylinder, provided with a shoulder near its upper part, is a collar or sleeve arranged to slide freely upon the same, its lower end being provided with arms and a central ring through which passes a rod C. This rod extends up through the cylinder, and has a perforated plate attached to its upper end which serves as a guard or stop to the valve. At the lower end of the valve is a screw thread and nut. Between the sliding collar and shoulder on the cylinder is an India-rubber packing. By screwing up the nut on the rod the packing will be expanded, and thus may be always kept in working order.

Claim.—The combination of the two open adjustable cylinders or sleeves A B, open ring *c*, and packing F, with the rod C, valve E, perforated plate *f*, and nut D, all in the manner herein shown and described.

No. 36,913.—CHARLES PONTEZ and C. L. MCALPINE, of New York, N. Y.—*Improvement in Forming Sub-Foundations.*—Patent dated November 11, 1862.—Ante-dated May 11, 1862.—This invention consists in forming a foundation of concrete or other solid material, which extends laterally beyond and beneath the area enclosed by the hollow pile, instead of the usual plan of filling the hollow cylinder or pile directly with sand or concrete.

Claim.—The method of forming sub-foundations, as herein shown and described, which consists substantially in extending the foundation from within the tube, as set forth.

No. 36,914.—S. O. POST, of Chicago, Ill., and E. J. POST, of Vienna, N. J.—*Improvement in Axles and Reaches for Vehicles.*—Patent dated November 11, 1862.—The bar or bolster which connects the axle arms together is made of corrugated sheet metal, and is secured to the same by bolts or rivets.

Claim.—The application of corrugated sheet metal to bars or bolsters, for wagon axles, and the mode of securing the arms to the same, in the manner described, and for the purposes herein specified.

No. 36,915.—SQUIRE RAYMOND, of Venice, N. Y.—*Improvement in Horse Pitchforks.*—Patent dated November 11, 1862.—This device is composed of two forked arms attached by joints to a pulley frame, the said arms being connected by levers and operated by means of a rope attached to a horse, so that the hay can be taken from a cart and raised to the desired spot, when it is discharged by pulling a cord attached to the lower part of one of the forked arms.

Claim.—The fork arms D D, attached by pivots or joints to the pulley frame B, in combination with the arms or levers E E', secured in the fork arms D D, by pivots *f' f''*, and connected at their inner ends by a pivot *f''*; the lever E', being provided with an extension *g*, and all used in connexion with the rope F and cord J, arranged as and for the purpose set forth.

No. 36,916.—NATHANIEL RICHARDSON, of Byberry, Pa.—*Improvement in Coupling Thills to Axles.*—Patent dated November 11, 1862.—In this device the clip is of ordinary construction, and the joint socket of the thills is secured between its bearings in the usual manner and coupled by means of a simple plane bolt. Instead of being cut with a screw thread on its end and held by a nut, it is retained in place by a flat bent spring resting against its head. On the inside of the head of the coupling bolt, and resting between it and the bearing of the clip, is a coiled spring which encircles the bolt and presses its head outwards against the end of the aforesaid bent spring.

Claim.—Retaining the coupling bolt C in place, and preventing its rattling, and at the same time allowing it to be easily and expeditiously inserted or removed, by means of the retaining spring D resting against it, and the coiled spring *c*, or its equivalent, reacting to throw it outward, the whole being arranged, combined, and operating substantially as herein set forth.

No. 36,917.—A. T. SCHMIDT, of Pittsburg, Pa.—*Improved Apparatus for Burning Liquids Lighter than Water.*—Patent dated November 11, 1862.—This invention consists in a method of using oil or other inflammable fluids of a specific gravity lighter than water, as a fuel for the purpose of heating, cooking, generating steam by burning it without any wick or other solid vehicle, as it floats on the surface of a body of water, through which it is passed to supply the consumption caused by combustion. The water and oil are placed in an iron vessel over the furnace, and provided with the proper pipes leading from supply cisterns, and also with tubes for admitting air to the body of the flame.

Claim.—The mode hereinbefore described of employing carbon oil, coal oil, and other similar fluids or compositions of fluids, as fuel for furnaces, fireplaces, &c., by passing it through water, on the surface of which it is ignited, in the manner and for the purposes hereinbefore described.

Also, the use of apparatus for burning carbon oil and other similar fluids as fuel, consisting of a fire-box supplied with water and oil or other burning fluid, by means of pipes, from suitable reservoirs of those fluids.

Also, the use of apparatus for burning carbon oil and other similar fluids as fuel, consisting of a fire-box hung on pivots or gimbals, and having projections inside to prevent the overflow of the water, combined with a fire-chamber inserted in the fire-box, so as to be immersed in the water, thus confining the oil or burning fluid within the fire-chamber, substantially in the manner hereinbefore set forth.

No. 36,918.—L. M. SEVERANCE, of Dixon, Ill.—*Improvement in Platform Scales.*—Patent dated November 11, 1862.—This invention consists in a combination of levers and beams in connexion with the scale, by which it is designed to render the apparatus simple in construction, as well as compact and portable.

Claim.—The combination of the parallel beams B B, and levers D' D' D'' D'' and I, and the scale beam L, all arranged as herein set forth.

No. 36,919.—F. G. SHALLING, of Somerset, Mass.—*Improvement in Locks.*—Patent dated November 11, 1862.—Each tumbler is provided with an inverted T-shaped slot to receive a

hasp or eye which passes into the case through an opening in its upper edge, the springs c tending to keep the right-hand edges of the slots in the said eye and securing them in their case. A stop E is attached to the upper end of a vertical bar which is placed against one end of the case, the said bar having a spring G connected with it which tends to keep the stop down back of the tumblers and prevent them from being shoved back to release the eye, so that the stop and tumblers require to be acted upon simultaneously, which admits of the use of the proper key only in unlocking the lock.

Claim.—The combination of the tumblers B, stop E, and plate H, with the springs *c* G, applied respectively to the tumblers and stop, and all arranged to operate as and for the purpose herein set forth.

No. 36,920.—JESSE SINCLAIR, of Davenport, Iowa.—*Improved Animal-Shoeing Stock.*—Patent dated November 11, 1862.—This invention is designed more especially for shoeing vicious or fractious animals, and consists in an arrangement of lifting bars and belly and back girths, with the cord and windlass and a proper actuating mechanism. Foot-rests are also provided for supporting the animal's foot while the shoe is being fitted and nailed.

Claim.—First, the lifting bars G and girths J J′ and K K′, in combination with the cords *d*, windlasses F F′, gear wheels *n o*, and winch *m*, when arranged to operate in the manner and for the purpose specified.

Second, the foot-rest H, shaft *f*, and lever *g*, in combination with the arm L and rings *i*, when arranged to operate in the manner specified.

No. 36,921.—H. B. SLAUGHTER, of Crumpton, Md.—*Improvement in Preserving Fruit, &c., in Sealed Cans.*—Patent dated November 11, 1862.—This invention is explained by the claim.

Claim.—In the process of preserving fruits, meats, &c., in hermetically sealed cans or jars, leaving an opening or openings in the can or jar, and immersing it in sirup or other liquid, and boiling it thus immersed or submerged, so that the sirup or liquid may circulate through the fruit or other contents of the can or jar, substantially as herein described.

No. 36,922.—C. W. TALIAFERRO, of Keithsburg, Ill.—*Improvement in Cultivators.*—Patent dated November 11, 1862.—This invention consists in a method of arranging a series or gang of ploughs attached to a mounted frame, so that they may be readily raised and lowered, and also adjusted or turned either to the right or left, as circumstances may require. Attached to the draught pole is a bar which extends backward underneath the frame, and has two toothed wheels secured to it, one at each side, which serve to protect the plants from the clods of earth thrown up by the foremost shovels or ploughs.

Claim.—First, the plough beams G, connected at their front ends by universal joints *d* to pendant supports I at the front part of the frame A, and provided at their back ends with journals *c*, which are fitted in pendant guides H at the back ends of the frame A, in combination with the uprights *h j*, bar L, and rock-shaft M, with treadle or foot-piece N attached, all arranged as and for the purpose set forth.

Second, the rotary shield or guard formed of the two wheels Q Q, provided with radial teeth or rods *m*, and attached to the bar P, which is connected to the draught pole B by the links *l l*, substantially as and for the purpose set forth.

No. 36,923.—HIRAM STORMS, of Ann Harbor, Mich.—*Improvement in Carding Engines.*—Patent dated November 11, 1862.—This invention consists in inserting in the spaces between the cards of the fancy cylinder strips of wood or other material coated on their faces with emery. These emery-coated faces being even with or slightly below the tops of the teeth of the fancy cylinder, and moving at a higher velocity than the tops of the teeth of the main cylinder, serve to keep the teeth of the said cylinder always ground and sharp.

Claim.—Furnishing the fancy cylinder of a carding machine with emery-coated strips or grinding surfaces of similar character arranged in the spaces between the cards, substantially as herein specified.

No. 36,924.—M. H. SMITH, of Four Corners, Ohio.—*Improved Apparatus for Evaporating Saccharine Liquids.*—Patent dated November 11, 1862.—This apparatus consists of three or four separate pans communicating with each other by means of faucets, and placed at different levels in such relation to each other that the liquid can be made to flow with more or less velocity successively from one pan into the other, each pan being provided with a series of transverse partitions in combination with strainers fitting loosely on the said partitions in such a manner that they can be adjusted in the proper position to allow the liquid to pass through them in flowing from one pan to another. At or near the bottom of the several partitions are narrow central openings, so that in boiling the liquid an under reverse current from the sides of the pans to their centre is produced, which causes the liquid to pass over the hottest part of the same, and permits no portion to remain in any of the pans.

Claim.—First, the arrangement of the pans B C D E, provided with transverse partitions *b′ c′ d′ e**, and communicating with each other by faucets *f g h*, or their equivalents, in combination with the main furnace A and the side furnace G, all constructed and operating as and for the purpose described.

Second, the arrangement of the central apertures *e* and side apertures *e′* in the partitions *b′ c′ d′ e** of the pans B C D E, as and for the purpose specified.

No. 36,925.—FRANKLIN WESSON, of Worcester, Mass.—*Improvement in Breech-loading Fire-arms.*—Patent dated November 11, 1862.—This invention consists in the employment of a slotted slide link composed of a flat piece of steel plate fitted in a groove provided for its reception in one side of the barrel near its rear end. This link is slotted longitudinally, and has also a transverse slot at the bottom of the same. The longer slot receives a small pin *h* secured in the barrel within a groove, and the shorter or transverse slot receives the end of a pin *i* screwed through one side of the frame. The barrel is secured in a closed position by means of a bolt E arranged to slide in a groove in the bottom of the frame. On the rear end of this bolt is formed a tongue *m* which enters a notch in the tumbler or but of the hammer, so arranged that the bolt cannot be drawn back except when the hammer is at half cock.

Claim.—First, the combination of the double-slotted oscillating link D and pins *h i* with the frame A and barrel C, in the manner herein shown and described.

Second, the combination of the tongue *m* with the locking bolt E, as herein shown and described.

No. 36,926.—P. D. WESSON, of Providence, R. I.—*Improvement in Evaporators for Saccharine and other Liquids.*—Patent dated November 11, 1862.—This invention consists in the application to a steam jacket used in connexion with an evaporating apparatus, of a steam trap, the operation of which is based upon the expansion and contraction of a metal bar or tube caused by the rising or falling of the temperature of the medium surrounding the same or passing through it, in such a manner that by the action of said trap the temperature in the interior of the steam jacket is not permitted to exceed certain limits either up or down, and consequently the heating or burning of the liquid is avoided, and a uniform temperature maintained.

Claim.—The application of a steam trap E to the steam jacket B, when the latter is used in combination with an evaporating pan A, substantially as and for the purpose herein specified.

No. 36,927.—R. T. WILDE and S. H. LYON, of Brooklyn, N. Y.—*Improvement in Dies for Forming Hats.*—Patent dated November 11, 1862.—The nature and object of this invention are explained by the claim.

Claim.—The construction of the upper die with a cavity *c* so formed in its face that it acts upon the upper surface of the brim of the hat, only close to the sides of the crown, and at the margin thereof, but yet confines the heat to the said surface, substantially as and for the purpose herein specified.

No. 36,928.—J. M. WOODCOCK, of Bridgeport, Ohio.—*Improvement in Horse-Rakes.*—Patent dated November 11, 1862.—The rake and rake-head are of the usual construction. Secured to the axle is a perpendicular post, in which is arranged a sliding weight attached to a cord which passes over a pulley and is secured to the rake-head for the purpose of raising the latter. To prevent the hay from rolling, and to clear it from the teeth when elevated, use is made of dischargers consisting of coiled wire attached to the axle, and so curved and pitched downwards as to press upon the hay and prevent it from spreading as the teeth pass over it. Attached to the rake-head is an arm extending part way to the axle, and attached to the axle by a bolt passing through it and the axle, which, in connexion with a curved arm and spring, are made to lock the teeth at any required elevation from the ground.

Claim.—The combination of weights with the rake-bar so that the teeth may be lifted with ease off from the ground, or may be operated automatically, substantially in the manner as herein shown and set forth.

Also, the use of spring clearers or dischargers, in combination with spring rake-teeth, the two being arranged to operate in conjunction with each other in the manner and for the purpose set forth.

Also, the herein-described device for locking, at any required elevation from the ground, of the rake-bar, the same consisting of a curved ratchet bar fast on and movable with the tilting rake-bar, in combination with a mortise and spring latch fast on the axle, the said parts being arranged as described to operate in the manner herein set forth.

No. 36,929.—WILLIAM WORKMAN, of Ripon, Wis.—*Improvement in Broad-cast Seeding Machines.*—Patent dated November 11, 1862.—Corresponding in position with the discharge openings of the hopper, and directly under them, are situated conductors or tubes for conveying the seed, and under the conductors are curved pieces termed scatterers which are formed with a rounded, inclining surface so as to disperse on all sides the seed falling thereon. The lower ends of the conductors are of a narrow oblong shape, longitudinally of the scatterers, so as to concentrate the seed as it falls through the openings. The shanks of the teeth are set in bars vibrating upon and extending back from a shaft in the rear of the hopper, and are provided with a set of adjusting holes through either of which and the sides of the teeth-bars are inserted wooden pins. Beneath the teeth-bars the shanks are respectively provided forks or projections which serve as braces to sustain the teeth against any obstruction that may be easily overcome.

Claim.—In combination with the convex, rounded scatterers M M, the conductors I I,

Claim.—In combination with the convex, rounded scatterers M M, the conductors L L, the bottom discharge opening thereof being formed of narrow oblong shape longitudinally of the scatterers, in order to direct the seed to the centre of the same, and thus insure its proper and equal dispersion at all times, constructed and arranged as herein set forth.

Also, the teeth shanks P P, provided with adjusting holes *n n n*, and with the rearwardly projecting forks *r r* in combination with the bars O O, the whole arranged so that the said shanks are braced against obstructions, and so that they may be set at different angles, constructed and arranged as herein described.

No. 36,930.—G. C. WORTH, of Upper Sandusky, Ohio.—*Improved Rein-Guard for Horses.*—Patent dated November 11, 1862.—This invention consists in the attachment to the rear part of the harness, or to the horse, of a device extending over the dock, over or through which device the reins pass in a direct line from the terret eyes of the saddle or back pad or hames to the hand of the driver, for the purpose of preventing the horse from catching the reins under his tail.

Claim.—First, the application of a light frame, plate, or guard to the rear part of the harness or horse, or to the reins or lines, when said frame, plate, or guard shall extend over a part or the whole of the horse's dock, and over or through which said frame, plate, or guard the reins or lines pass.

Second, the combination of the frame A with the loop B or its equivalent, as and for the purposes described; whether the said frame be covered with cloth or net-work or not, or whether the said frame be made wholly or in part of India-rubber or other elastic gum.

Third, the frame A and loop B, in combination with the eye or eyes G and G′, either with or without the cloth or net-work covering I, substantially as and for the purposes set forth.

No. 36,931.—J. O. CLAY, of Hudson, Wis., assignor to F. C. GRIDLEY, of the same place.—*Improvement in Weather-Strips.*—Patent dated November 11, 1862.—To the lower edge of the door is attached a strip bent so that its lower portion forms an angle with the inside face of the door, and upon the sill of the door is a plate connected to the same by means of hooks and staples so as to swing up and down freely. From this plate extends upwards an arm or tappet, so that when the door is being closed the edge of the stationary strip catches under the tappet, and when the door is completely closed the plate is turned up by the action of the strip on the tappet, and completely closes the crevice between the door and the sill.

Claim.—The combination of the tappet *e* with the hinged plate C and strip *b*, in the manner herein shown and described.

No. 36,932.—JAMES A. and HENRY A. HOUSE, of Brooklyn, N. Y., assignors to Themselves and A. G. SEAMAN, of the same place.—*Improvement in Sewing Machines.*—Patent dated November 11, 1862.—Reference to the specification and drawings will be necessary for a description of this invention.

Claim.—First, the combination of an eye-pointed needle, working up from below the table, and penetrating the fabric with a thread-carrier, also working up from below and penetrating the fabric, substantially in the manner described, for the purpose set forth.

Second, mounting the entire stitching mechanism upon an independent skeleton frame or disk, having a periodical intermittent rotary movement imparted to it, substantially in the manner described, for the purpose set forth.

Third, the combination of a bed-plate, upon which the material to be sewn is clamped, having a periodical intermittent progressive motion in a rectilinear path, and in alternately opposite directions, with an independent disk or frame carrying the stitching mechanism, and having an occasional intermittent rotating movement in one direction, when co-operating, substantially in the manner described, for the purpose of working automatically both sides and the eye of a button-hole, as herein set forth.

Fourth, the combination of a stitching mechanism, substantially such as described, with a bed-plate or table upon which the fabric rests, in such a manner that the whole of the entire mechanism shall be beneath the bed-plate, as herein described.

Fifth, the combination of an eye-pointed needle with a shank so curved or bent that the needle shall move parallel to the shank and carry its loop through the fabric, while the shank vibrates near the edge thereof, substantially in the manner described, for the purpose of sewing over the edge of a fabric, as herein set forth.

Sixth, the curved finger or thread-carrier *n*, when arranged and operating substantially as and for the purpose specified.

Seventh, the combination of the inclined shaft N of the thread-carrier, when made to rest in open bearings, with a retaining spring *n*2, substantially as described, for the purpose set forth.

Eighth, the combination of the cam O, inclined shaft *n*, and needle-mandrel K, when co-operating, substantially in the manner and for the purpose described.

Ninth, the combination of the rotating disk G and stitching plate M, as and for the purpose described.

Tenth, the combination of the stitching-plate M and tension-post *m*, substantially as and for the purpose described.

Eleventh, the combination of the spool-case P P′, disk G, needle *l*, and thread-carrier *n* when arranged and operating substantially in the manner described.

Twelfth, the combination of the spool-case P, tension-post R′, adjusting spring S, and thread-carrier *n*, substantially as described, for the purpose of regulating the position of the pearl, as set forth.

Thirteenth, the combination of the sliding frame B and traversing screw E, substantially in the manner and for the purpose set forth.

Fourteenth, the combination of the rotating disk G with the friction-springs T, substantially as and for the purpose described.

Fifteenth, the combination of the adjustable guide bar I 2 and fixed bar I′, with the sliding frame B, substantially in the manner and for the purpose described.

Sixteenth, the combination of the guide bars I′ I 2 with the stop-lever I and spring pawl *k*3, substantially in the manner and for the purpose described.

Seventeenth, the combination of the shifting lever U with the rotating disk C′, substantially in the manner and for the purpose described.

Eighteenth, the combination of the pusher *h*, ratchet wheel H, and spring pawl *k*3, substantially in the manner and for the purpose described.

Nineteenth, the combination of the groove V on the bed-plate, with the stop pin *v*′ on the disk, substantially as and for the purpose set forth.

Twentieth, the combination of the two sections G G′ of the disk, when connected and co-operating substantially in the manner and for the purpose described.

Twenty-first, the combination of the tension-posts R R′ with the disk G, when arranged beneath the same as and for the purpose described.

Twenty-second, the shield or thimble M′ to protect the needle, to bear upon the fabric, and to retain the gimp in position, substantially in the manner described.

No. 36,933.—ABEL PUTMAN, jr., of Chester, Vt.—*Improvement in Spring Hooks for Fastening Garments.*—Patent dated November 11, 1862.—This invention consists in the employment of a spring hook attached to a button or head, or formed with a ring or loop to serve as a head, the spring hook being so constructed as to pass through the hole or eyelet in the garment, and be securely retained therein.

Claim.—A spring hook or fastening A formed of a piece of wire doubled and bent, as shown, in combination with the button or head B or ring C, or other equivalent, for the purpose specified.

No. 36,934.—ALFRED BERNEY, of Jersey City, N. J.—*Improved Liquid-fire Shell or Projectile*—Patent dated November 11, 1862.—This projectile is formed of a hollow shell, through the centre of which passes a tube which contains the bursting charge of powder. The cavity surrounding the tube is filled with a composition consisting of benzole, crude petroleum, coal tar, turpentine, residuum from distilled petroleum, and coal oil from coal tar.

Claim.—The composition for filling shells composed of the materials and in the proportions substantially as set forth.

Also, as a new manufacture, a fire shell, composed of a hollow shot A, strong tube or chamber C for the bursting charge of powder, and filling tube B, all substantially as and for the purpose set forth and described.

No. 36,935.—HUGH BARR, of Independence, Iowa.—*Improvement in Churns.*—Patent dated November 18, 1862.—This apparatus consists of a box which is caused to revolve upon a shaft attached to its under part. Within the box is a stationary shaft provided with beaters or brakes formed with bevelled front faces and flat on their rear sides. These brakes are stationary, and the churn is made to revolve around them.

Claim.—The rotary cream box I, in combination with the stationary brakes M M, provided at one side with V-shaped faces *e*, and at the opposite side with flat faces *f*, when said brakes are placed in an inclined position, as and for the purpose herein set forth.

No. 36,936.—ALEXANDER BECKERS, of Hoboken, N. J.—*Improved Steering Apparatus.*—Patent dated November 18, 1862.—This invention consists in the employment of a drum formed of two cylinders of different diameters, which drum moves with the tiller, and to which ropes or chains are attached that pass through fixed blocks at or near the bulwarks. The double drum being of unequal diameter, the rope or chain at one side is shortened as the rope on the opposite side is lengthened by the rotation of the drum, and the rudder is thereby easily moved.

Claim.—The barrels 1 and 2 on the arms *c c* or tiller, in combination with the ropes or chains *h* and *i* and sheaves or blocks *f* and *g*, substantially as and for the purposes set forth.

No. 36,937.—JOSEPH BERTHOUD, of Paris, France.—*Improvement in Apparatus for Panoramic Advertising.*—Patent dated November 18, 1862.—This apparatus is composed of a strip of cloth, upon which advertisements are printed and which is wound upon two rollers, so that as the latter revolve notices are alternately presented to the eye; and the invention consists in an arrangement of levers, ratchet and stop wheels, in connexion with the rolls, in

such a manner that the motion of the cloth may be arrested and the cloth held in the desired position, or the motion reversed upon intermittently pulling a cord properly attached.

Claim.—The levers *l* and *m*, the ratchet wheel *e'*, and the stop wheel *f*, combined with the carrying rolls *d* and i, when actuated substantially as described and for the purpose specified.

No. 36,938.—JOSEPH BRADT, of La Porte, Ind.—*Improvement in Beehives.*—Patent dated November 18, 1862.—In this hive the entrance is so arranged that the bees are caused to fly instead of being obliged to crawl to the cross-bars to which the comb is attached, and as the hive is filled with the comb and honey, the bees work up to the boxes over the main hive and there deposit the surplus honey, which can be removed at pleasure, the object being to prevent the moth from depositing eggs within the hive. The bottom of the hive is formed of inclined partitions, which allow the extraneous matter to collect in a drawer below, and in front of the inclined portions is a hinged flap that admits of inspection of the hive.

Claim.—The construction of the hive or main box *b* with bars *f*, flap *d*, and inclined bottoms *g*, arranged and operating with the entrance D, box A, honey boxes *a*, and drawer *e*, as set forth and described.

No. 36,939.—ABEL BREAR, of Saugatuck, Conn.—*Improved Apparatus for Raising and Forcing Water.*—Patent dated November 18, 1862.—This invention consists of an apparatus for raising and forcing water or other liquid by the pressure of steam, compressed air or gas upon its surface in a suitable vessel, into which it runs by gravitation, and is forced by the pressure of the atmosphere after a vacuum has been produced by the condensation of steam.

Claim.—The apparatus composed of the vessel A, pipe or opening B, pipes G D, cock H, or its equivalent, and the two self-acting check valves C E, the whole combined to operate substantially as herein specified.

No. 36,940.—F. H. BROWN, of Chicago, Ill.—*Improved Gas Regulator.*—Patent dated November 18, 1862.—Within a gas burner is placed a bivalve bellows consisting of two circular pieces of rubber, or other similar flexible material, connected together at their edges and attached to the top of a tube by means of a flange. To the upper side of the bellows is secured by a nut a rod which passes downwards through the bellows, and terminates in a cone-shaped valve. The upper side of the bellows is caused to move by the pressure of the gas, by which means the opening of the valve below is regulated according to the pressure on the bellows.

Claim.—First, the bivalve bellows A, made, constructed, and operated as and for the purposes set forth.

Second, tube F, in combination with flange *a* and bellows A, constructed and arranged as and for the purposes specified.

No. 36,491.—ALEXANDER BUCHANAN, of New York, N. Y.—*Improved Slide Valve for Steam Engines.*—Patent dated November 18, 1862.—This invention relates to an oscillating segment valve, the face of which is curved and oscillates upon a seat of corresponding form, and the invention consists in combining the valve with the pendulum or oscillating arm, to which it is attached by means of a flexible and elastic plate, which constitutes a portion of the back of the valve, and which, while it allows the greater portion of the pressure produced by the steam on the back of the valve to be transmitted to a fixed bearing at the axis of oscillation, at the same time permits the valve to be pressed against the seat with sufficient force to counteract the tendency to lift the valve, which effect is produced by the pressure of the steam in the ports during portions of the stroke of the valve.

Claim.—Combining an oscillating segment valve A with the pendulum or oscillating arm I, which suspends it from fixed bearings by means of a flexible and elastic plate C, or its equivalent, constituting a portion of the back of the valve, substantially as and for the purpose herein specified.

No. 36,492.—E. J. CHAPIN, of Ottawa, Ill.—*Improvement in Watchmakers' Lathes.*—Patent dated November 18, 1862.—This invention consists in the combination of a number of devices in such a manner that all the different lathes used by watchmakers may be obtained and used with a single bed-piece and with but one driving mechanism, and at the same time be capable of a ready adjustment and operation. Reference to the specification and drawings will be necessary for an understanding of the construction and operation of the machine.

Claim.—First, the mode of attaching the bed-piece I to the table or bench A, as shown and described, to wit, by means of the bell shaped base H, fitted on the annular way G and secured thereto by the screw K, hook J, and pin L, all arranged as shown, to admit of the turning or adjusting of the bed-piece I on the table or bench.

Second, the gear-cutting frame S provided with the mandrel T, cutter U, and set screw *h*, and connected to the sliding plate *f* by centre points *g g* to admit of the raising and falling of said frame and its proper adjustment relatively with the wheel to be cut, as set forth.

Third, the combination of the mandrels J O with the bed-piece I, rests K N, chuck M, and gear-cutting frame S, all arranged as described, to form a new and useful lathe, for the purpose herein specified

No. 36,943.—C. B. COTTER, of Milford, Pa.—*Improvement in Moulds for Casting Metals.*—Patent dated November 18, 1862.—The composition used in this invention consists of hickory or other hard-wood ashes, which are sifted and ground to the fineness of flour, and are then dampened with concentrated lye and worked to the consistency of putty. To this composition may be added hydraulic or plastic cement when desirable.

Claim.—The composition substantially as above described, whether the same be of ashes and lye alone, or the same in combination with the hydraulic or plastic cement, as and for the purposes set forth.

No. 36,944.—JOHN P. COWING, of Seneca Falls, N. Y.—*Improvement in Bell Yokes and Fastenings.*—Patent dated November 18, 1862.—This invention consists in making the yoke with a square hole to receive the bolt that holds the bell, the bolt having four or more flat sides so that the tongue will always swing at right angles with the yoke; and by turning the bell upon the bolt, the tongue may be made to strike upon a different part of the bell.

Claim.—Making the yoke of the bell with a square hole to receive the bolt that holds the bell.

Also, the bolt, with four, more or less, flat sides to fit the corresponding hole in the yoke, with the hole in the top of the bell sufficiently large to turn on the corners of said bolt, for the purposes above specified.

No. 36,945.—J. L. ELLIS, of Concord, Ill.—*Improvement in Cultivators.*—Patent dated November 18, 1862.—This machine consists of two rock shafts, having shovels or shares attached to their lower ends and pivoted to transverse bars. To each of the rock shafts is attached an upright, the two being connected at their upper ends by a cross-bar, and by means of a lever, within reach of the driver, the shovels may be moved to the right and left at pleasure as the machine moves along. The main frame consists of two parallel side bars connected by angular bars, which are elevated at the centre so as to pass over the plants. The driver's seat is placed upon two curved bars, secured at their ends to two parallel bars which are pivoted to the rear of the main frame.

Claim.—The rock shafts C C, uprights D D, connected at their upper ends by the bar E and the lever I, said parts being applied to the main frame A, provided with curved transverse bars B B', in combination with the supplemental frame composed of the parallel bars L L and curved transverse bars K K, with the driver's seat J attached, the supplemental frame being mounted on wheels connected to the main frame, and all arranged to operate as and for the purpose set forth.

No. 36,946.—JOHN FARRELL, of New York, N. Y.—*Improvement in Locks.*—Patent dated November 18, 1862.—This invention consists in mounting the lever tumblers on an axis at or about the centre of their length in combination with the placing of the pins or plugs and the keyhole, so as to act on the rear ends of the tumblers instead of the forward ends, which latter perform the functions of stops to prevent the bolt from being thrown back, so that if the sliding pins in the inner lock plate be cut or broken or otherwise taken out their forward end will not be prevented from acting as stops to hold the bolt, and thus prevent it from being thrown back.

Claim.—As an improvement on Hall's lock, (patented August 1, 1848,) mounting the lever tumblers on an axis at or about the middle of their lengths, substantially as described, in combination with the placing of the keyhole, so as to act on their back instead of their forward ends, substantially as and for the purpose described.

No. 36,947.—J. W. FOUST, of Hammondsburg, Pa.—*Improvement in Hay-loading Machines.*—Patent dated November 18, 1862.—This invention consists in the employment of revolving rakes in combination with endless chains having transverse slats or bars attached, and arranged in connexion with a wagon so as to rake and carry up the hay from the windrow and deposit it on the wagon as the latter is drawn along.

Claim.—The revolving rakes formed of the teeth *b*, attached to wheels A and provided with the arms D, in combination with the pendent bars *h*, pins i or their equivalents, and the endless carrier formed of chains *f f*, the cross-bars or slats *q* and the cords *j*, all arranged as shown with the frame D', to operate as and for the purpose herein set forth.

No. 36,948.—B. and C. FURNAS, of Ononwa, Iowa.—*Improvement in Cultivators.*—Patent dated November 18, 1862.—This machine is constructed of two parallel bars H H', secured by pins at their forward ends to pendent bars attached to a cross-bar which is supported upon the draught pole. Upon the rear end of the bars H H' is the driver's seat, and fitted in suitable bearings are also two bars M connected at their rear ends by a curved cross-piece so as to form a back for the driver. The beams G which carry the ploughs are so connected with the front ends of the bars M, that by depressing the latter the ploughs will be raised from the ground. Levers or "treadles" are also pivoted to the plough-beams and connected by a cord or chain to a bar above, so that by depressing the levers with the feet the ploughs will be raised from the ground. To the plough-beams are also attached uprights fitted in guides in a transverse bar, the uprights being connected by a cross-bar provided with a series

of holes through which pins pass into the upright, so as to admit of an adjustment of the plough-beams to a greater or less distance apart.

Claim.—First, the bars H H′, connected at their front ends to the pendents F F, and provided at their back ends with the driver's seat I, in combination with the bars M M connected at their back ends with the cross-piece N, and attached to the plough-beams G G by the cords or chains *k k*, all arranged substantially as and for the purpose herein set forth.

Second, the treadles K K, when attached to the plough-beams G G, and connected to the cords or bar L by the cords or chains *l*, as and for the purpose herein set forth.

Third, the uprights O O attached to the plough-beams G G fitted in the guides *m m* of the bar L, and connected by the bar P, substantially as and for the purpose specified.

No. 36,949.—P. W. GATES, of Chicago, Ill.—*Improvement in Apparatus for Evaporating Saccharine Liquids.*—Patent dated November 18, 1862.—This invention consists in the combination of a fire-arch having a divided fire-flue, a damper, and lateral hot-air flue, with an evaporator pan having a defecating apartment and a finishing department. The bottom of the defecator is a lateral continuation of the bottom of the pan which causes the juice to flow freely to the latter. The divided fire-flue is provided with a damper, so that either flue may be used separately when desired At the bottom of the pan are arranged steam coils, one or more of the bends of which extend from one end of the pan to the other, while the other bends extend only the length of the flues.

Claim.—First, the combination of the fire-arch, damper, evaporating pan and defecating and finishing chambers, arranged in the manner and for the purposes herein set forth.

Second, the combination with the fire-arch and damper of steam coils G G′ and evaporating pan C C′, substantially as and for the purposes herein described.

Third, the construction of the steam coils with long and short bends, substantially as and for the purpose described.

No. 36,950.—WM. HAILES, of Albany, N. Y.—*Improvement in Grates for Coal Stoves and Furnaces.*—Patent dated November 18, 1862.—This invention consists of a circular grate having a series of projections on its outer periphery, and upon its inner rim a series of long and short projections alternating with each other, and so arranged that the ashes space is greater at the centre than at the circumference. The grate rests upon a bar having a loop cast in it for the reception of a projection, on the grate the size of the loop limiting the movement of the grate.

Claim.—The projections *d d* on the outer periphery of the grate, in combination with the inner projections *a b*, and with the looped bar in operating the grate, substantially as above described.

No. 36,951.—HENRY HARPER, of Berlin, Wis.—*Improvement in Gauges for Carriage Axles.*—Patent dated November 18, 1862.—This invention consists in the employment of a "bevel" provided near its periphery with rests for holding the respective axle arms, the distance between which is equal to the intended distance between the tracks of the opposite wheels of the carriage. At each end of the bevel are arranged scales having a motion around centres at said ends, and provided with a brass rule which revolves upon the said centre and is held in any desired position by means of a clamp and screw; the object being to bend the axis of the axle arm down just enough to make the spokes perpendicular when they point downwards.

Claim.—First, the method herein described of giving the proper pitch to carriage wheels by means of the bevel, Fig. 1, and the scale, Fig. 2, substantially as set forth.

Second, the use of the bevel, constructed as set forth, for the purpose of giving the proper pitch to carriage wheels, substantially in the manner above set forth.

Third, the scale, Fig. 2, when used in the manner above set forth, for the purpose of giving the proper pitch to a carriage wheel.

No. 36,952.—EBENEZER HARRINGTON, of Boston, Mass.—*Improvement in Stove Grates.*—Patent dated November 18, 1862.—This invention consists in arranging beneath the grate a rectangular frame provided with a series of transverse and parallel bars and two short longitudinal bars at the centre, from which bars a series of pins extend upward through the grate. The said frame is also provided with trunnions at either end, which are so connected with the grate as to enable both grate and frame to be turned simultaneously and empty the contents of the grate, the parts being so arranged as to impart both a longitudinal and transverse motion to the grate.

Claim.—An improved grate B and sifter or sliding frame C, as not only having their series of pokers *i i i* arranged with respect to the guide bars, as described, but as having the supporting trunnions *d e* extended from the frame C and applied to the fireplace A in manner and so as to operate the said frame C and the grate relatively to each other as well as with respect to the fireplace, substantially as specified.

No. 36,953.—WM. HARRIS, of Jersey City, N. J.—*Improvement in Machines for Rolling Tires.*—Patent dated November 18, 1862.—This machine consists of a stout carriage so fitted within a radial slot in the bed of the machine that it may be moved outward or inward by means of a screw turned by a crank. This carriage supports two horizontal rolls, the one acting upon the upper or narrow face of the tire, and the other on the lower or broad face. A third roller is mounted vertically on the adjustable carriage, and being shaped to conform to the outer face of the tire, serves as a guide or lateral support.

Claim.—The combination and arrangement of the rollers G E and F, in the adjustable carriage *e*, substantially as and for the purpose herein described.

No. 36,954.—JAMES JENKINS, of Elizabeth, N. Y., and HENRY WEISSENBORN, of Newark, N. J.—*Improved Furnace for Roasting Ores and for other Purposes.*—Patent dated November 18, 1862.—This apparatus is composed of a furnace tank at the lower part surrounded by a water casing or jacket. This casing is provided with two supply-pipes near its bottom, and two overflow pipes near its top. The upper part of the furnace consists of a feeder and a surrounding gas chamber. The lower part of the furnace rests within a water tank which, being filled when the furnace is in operation, furnishes an air-tight bottom to the furnace, and serves as a base to support the stock with which the furnace is charged.

Claim.—A furnace constructed substantially as herein specified, for the purposes herein named, or for any other where, from its properties, it may be used.

No. 36,955.—W. W. HUSE, of Brooklyn, N. Y.—*Improved Method of Preparing Chewing Tobacco.*—Patent dated November 18, 1862.—The nature of this invention is explained by the claim.

Claim.—In the manufacture of plug chewing tobacco, arranging the filling tobacco between two layers of filling in long troughs of the width of the intended plugs, and in that condition compacting and pressing it into a long strip of uniform thickness, substantially in the manner described.

Also, finally compressing the plugs in the cells of the long trough, provided with sliding partitions separating the several cells so that the partitions shall yield to the pressure as the plugs are compressed, substantially as described.

No. 36,956.—W. W. HUSE, of Brooklyn, N. Y.—*Improvement in the Process of Stripping Tobacco Leaves.*—Patent dated November 18, 1862.—The apparatus used in this process consists of a trough through which passes longitudinally a pipe communicating with any suitable steam generator. The portion of the pipe in the trough is perforated for the escape of steam into the trough, which latter is covered with a woollen cloth. This cloth forms a table upon which the tobacco leaves are placed, and the latter are thus acted upon by the steam so as to be readily stripped.

Claim.—The process of stripping tobacco leaves while under the influence of steam, substantially as and for the purpose described.

No. 36,957.—JAMES HOPKINS, of New York, N. Y.—*Improvement in Metal Screens.*—Patent dated November 18, 1862.—This screen is made of square wires laid parallel with each other and having their sides at right angles to the plane of the screen instead of being placed diagonally thereon, so as to produce square or parallel sided meshes of the same size all through, and preventing any substance from being wedged into the meshes at their point of intersection.

Claim.—The screen formed of square wires woven up or laid together as specified, with the sides of the said wire at right angles to the plane of the screen, for the purposes and as specified.

No. 36,958.—THOMAS JOYCE, of Brooklyn, N. Y.—*Improvement in Coffee Roasters.*—Patent dated November 18, 1862.—This device consists of two shallow pans hinged together, and supported in a frame upon trunnions at their ends, so as to admit of being rotated within the frame and readily opened when necessary.

Claim.—The combined coffee roaster and revolving griddle herein described, consisting of the two flat, shallow vessels B C, in combination with the trunnions and frame A, so arranged as to admit of being opened and of rotating, substantially in the manner and for the purpose above set forth.

No. 36,959.—H. K. KENYON, of Steubenville, Ohio.—*Improvement in giving Rotation to Ordnance Projectiles.*—Patent dated November 18, 1862.—The forward part of the projectile consists of a series of rectangular "punches" of different sizes, decreasing from the inner punch to the outer one, and arranged so as to have the corners of one at the centre of the side of the one preceding, but not projecting over the same, for the purpose of insuring its penetration of the object struck. Upon the part of the projectile in rear of the punches are arranged four friction rollers, which are set in oblong cross-shaped recesses in the flattened parts of the projectile, the said recesses being arranged obliquely to the longitudinal axis of the projectile, and the portions which receive the journals of the rollers rising on an incline as they run back, so that the projectile, in passing from the bore of the cannon, will, by frictional contact upon the plane surface of the bore, be caused to rotate.

Claim.—First, the specified relative arrangement of the corners of the respective sections of the punch point of the projectile, for the purpose set forth.

by means of a screw turned by a crank. This carriage supports two horizontal rolls, the one acting upon the upper or narrow face of the tire, and the other on the lower or broad face. A third roller is mounted vertically on the adjustable carriage, and being shaped to conform to the outer face of the tire, serves as a guide or lateral support.

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Claim.—The screen formed of square wires woven up or laid together as specified, with the sides of the said wire at right angles to the plane of the screen, for the purposes and as specified.

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Claim.—First, the specified relative arrangement of the corners of the respective sections of the punch point of the projectile, for the purpose set forth.

Second, constructing that part of the projectile in rear of the compound punch point with crossed or other similar shaped oblique recesses *g m*, when the parts *m* of said recesses rise on an incline, in combination with sliding, rising, and descending rollers *f*, substantially as and for the purpose set forth.

No. 36,960.—J. A. McCREARY, of Brooklyn, N. Y.—*Improvement in Devices for Holding Blind Slats.*—Patent dated November 18, 1862.—This invention consists in the employment of a slide, which is subjected to the action of a spring, and which moves up and down in a metal case attached rigidly to the slat bar. The spring slide is connected by means of a rod to a staple inserted in the upper cross-bar of the frame. The lower end of the rod is inserted into the spring so as to turn loosely in the same, the object being to set the slats in any desired inclination, and securely retain them in position.

Claim.—The arrangement of the swivel rod *f*, in combination with the spring slide *c*, frame A, and slat bar C, all constructed and operating substantially as and for the purpose shown and described.

No. 36,961.—B. MELLINGER, S. MELLINGER, Jr., and J. MELLINGER, of Mount Pleasant, Pa.—*Improvement in Horse Rakes.*—Patent dated November 18, 1862.—This invention is designed as an improvement upon the machine patented to the said Mellingers on May 13, 1862, and it consists in the employment of a double-armed lever and connecting rods, in connexion with the axle to which the rake teeth are secured, and with a clearer, suspended by means of staples from the said rake teeth in such a manner that, by the action of the lever, the rake teeth can be raised, and at the same time the clearer is made to slide out towards the points of the teeth when the load gathered by them is to be discharged.

Claim.—The arrangement of the double-armed lever E, and connecting rods *f h*, in combination with the axle A, rake teeth G, and clearer F, all constructed and operating as and for the purpose shown and described.

No. 36,962.—W. H. MILES, Jr., of Brooklyn, N. Y.—*Improved Paint Brush.*—Patent dated November 18, 1862.—This invention consists in providing a shoulder in the handle of the brush, beneath which the bristles expand as the handle is driven into place, for the purpose of preventing the tapering end of the handle from working loose and sliding back into the brush.

Claim.—The employment of a shoulder *o* in the handles of paint brushes, to prevent the handle from slipping back into the brush after the same has been driven into the brush, as specified.

No. 36,963.—W. A. PALMER, of San Francisco, Cal.—*Improvement in Amalgamators for Gold and Silver.*—Patent dated November 18, 1862.—At the bottom of the pan is fitted an annular plate having upon its under side a flanch extending around the edge, and forming a support for the plate, and also a flange at the centre, thus forming a chamber at the bottom of the pan. To the under side of this chamber is attached a pipe, through which steam is conveyed from any proper generator.

Claim.—In combination with an amalgamating pan A, a steam chest or chamber E, formed of a removable plate or false bottom B, provided with one or more flanches at its under side, substantially as and for the purpose herein set forth.

No. 36,964.—J. R. PETERS, of New York, N. Y.—*Improvement in Air Engines.*—Patent dated November 18, 1862.—This invention relates to that class of air engines known as "Stirling's," in which the air is heated in two vessels connected with two opposite ends of the working cylinder, and it consists in so operating the two plungers that the one in either heating vessel is stationary in its uppermost position, with the space below it full of heated air, while the working piston is making the stroke from the end of the cylinder in connexion with that vessel, the plunger in the other heating vessel making both its upward and downward stroke in the mean time, and causing the latter vessel to be filled with heated air to produce the return stroke of the working piston. The gland which is used to compress the packing in the stuffing box is made with a deep cup in its upper part for the reception of oil, and around the upper edge of this cup is secured a leather collar in close contact with the plunger rod, so as to prevent the escape of air.

Claim.—First, the operation of the plungers of the heating vessels, in connexion with the working cylinder, substantially in the manner herein shown and described, so that the plungers will alternately remain at rest at the top of the heating vessels, while the other plunger makes a downward and an upward stroke, as set forth.

Second, the construction of the stuffing-box gland with an oil cup *l* and flexible collar *n*, combined substantially as herein described for the purpose set forth.

No. 36,965.—PASCAL PLANT, of Washington, D. C.—*Improved Apparatus for Discharging Torpedoes under Water.*—Patent dated November 18, 1862.—This invention consists in the employment of a conducting tube made to slide in a ball and socket joint fixed in the side of a vessel above the water-line, so as to allow the tube to be depressed and brought to bear upon any object, the outer end of the tube being open on one side and curved at the end, the object being to fire rocket torpedoes under water, to destroy an enemy's vessel, or obstacles of any kind.

Claim.—The tube placed above the water-line, with its ball and socket joint, and otherwise substantially as and for the purpose described.

No. 36,966.—D. J. POWERS, of Madison, Wis.—*Improvement in Grain Drills.*—Patent dated November 18, 1862.—In a proper position in relation to the driver's seat is a foot-board suspended at each end from the frame, and attached thereto by means of screw bolts, so as to admit of being adjusted vertically, to suit the feet of the driver. The bars by which the drill teeth are borne and drawn are hinged to the front part of the frame as usual, and to the rear of the bars are hinged the drill teeth. Above this hinge is a dog extending forward to a stop, against the face of which latter the front end of the dog bears, being pressed against it by a spring which serves to hold the drill tooth in place as it moves along, but allows it to yield when meeting with an obstruction, and again causes it to return to its place when the obstruction is passed. From an eye on each drill tooth extends a cord upward to a roller extending across the frame, so that by bringing the roller into gear with the driving wheel the whole series of teeth may be raised by the forward movement of the machine. Upon a shaft extending longitudinally through the seed box are secured a series of short cylinders over the apertures in the bottom of the seed box. The faces of these cylinders are notched, and one set is arranged so as to move to and from the other, thus making a zigzag opening between them, the size of which opening may be regulated at pleasure.

Claim.—The suspended adjustable foot-board F, arranged substantially as and for the purpose herein specified.

Also, the combined application of a spring and friction surface to sustain the drill teeth M M upon their bars H H firmly and rigidly while in operation, but so as to yield with sufficient readiness when they meet obstructions, substantially as herein specified.

Also, the roller G, arranged in combination with the operating gearing of the machine so that the drill teeth may be raised together by the automatic action of the machine itself in its forward movement without stopping or halting, substantially as herein specified.

Also, the continuous zigzag seeding apertures *y y*, adjustable in width, substantially as and for the purpose herein set forth.

No. 36,967.—EDWARD PRECHT and VICTOR TOEPKEN, of New York, N. Y.—*Improvement in the Manufacture and Packing of Friction Matches.*—Patent dated November 18, 1862.—Antedated May 18, 1862.—This invention is explained by the claim.

Claim.—Making the match splints of thin strips of wood, in double sets or combs, those of each comb adhering together at the upper ends, substantially as and for the purposes herein specified.

Also, packing the tips of the matches in a band of paper, which is prepared with a composition or substance on its upper edge, whereby the match tips (correspondingly prepared) are ignited on coming in contact therewith in the act of drawing out of the package, substantially as herein specified.

No. 36,968.—REUBEN SHALER, of Madison, Conn.—*For a Centrifugal Spring Gun.*—Patent dated November 18, 1862.—This device is designed chiefly as a toy gun or as an instrument of practice in shooting. Near the forward end of the stock is secured a spring having a barrel attached at its other end. The barrel, having a bullet in it, is brought back and secured by a hook or catch, whence it is released by a trigger, and the bullet is projected by the forward motion of the barrel.

Claim.—The combination in the manner described of the stock 1, spring 6, barrel 8, and trigger 3, by which the bullet is discharged by centrifugal force, as above set forth.

No. 36,969.—JONATHAN SMITH, of Tiffin, Ohio.—*Improvement in Grain Drills.*—Patent dated November 18, 1862.—In this machine the seat frame is suspended from the under side of the main frame, so that the driver's seat may be placed low enough to enable him to see and regulate the operation of the furrow-openers as well as that of the upper part of the machine. Extending back to the foot-board of the driver's seat are the rear ends of treadles or levers, to which are attached chains extending up over grooved pulleys and around lever drums, so arranged that the whole or part of the teeth may be elevated by the driver, for the purpose of avoiding obstacles and to facilitate the turning of the machine. Combined with the treadles and lever drums are ratchet wheels and spring pawls, for the purpose of regulating the depth of penetration of the teeth in the ground, and of retaining the teeth at any desired elevation above the ground. To the under side of the seed box are applied slides, so that by moving the connecting or slide bar either to the right or left any desired number of the discharge holes may be made to remain open or closed at will.

Claim.—First, suspending the frame or bars that support the driver's seat from the under side of the main frame of the machine, substantially as and for the purposes described.

Second, the treadles or levers arranged as described, when combined with the separate

lower is placed a doubly curved spring, the upper end of which passes over the upper end

Second, the treadles or levers arranged as described, when combined with the separate lever drums for elevating a part or all of the teeth, substantially as set forth.

Third, in combination with the treadles or levers and lever drums, the ratchet wheels and spring pawls, as and for the purposes specified.

Fourth, the slide when constructed with the rectangular projections, and the means described for transverse adjustment, for the purposes and substantially as set forth.

No. 36,970.—G. S. G. SPENCE, of Salem, Mass.—*Improvement in Preserving Jars and Cans.*—Patent dated November 18, 1862.—This invention consists in making the cover of the jar of a convex form on its under side and projecting down, so as to enter the jar and fill up the space usually filled with air. In sealing the jar a heating iron of a form corresponding with and fitting into the upper side or concavity of the cover is used.

Claim.—Making the cover of fruit jars with a bottom projecting downward into the neck of the jar, so as entirely to exclude the air therefrom, substantially in the manner and for the purpose set forth.

Also, the sealing iron, constructed and used substantially as set forth to aid in expelling the air as described.

No. 36,971.—JOHN TAYLOR and R. W. BROWN, of Westerly, R. I.—*Improvement in the Döbereiner Hydrogen Lighter.*—Patent dated November 18, 1862.—This invention consists in the arrangement of two openings or passages leading from a channel *e* formed in the rear end of the nozzle, which connects with the bell or gas-generating chamber of the jar. One of these passages leads to the gas-generating chamber, and the other to the front of the nozzle. Surrounding the inner openings of these two passages is an annular lip or flange *e3*, which is tightly embraced by an India-rubber valve upon the end of the plunger, the latter being forced by an adjustable spring towards the base of the chamber *e*, thus closing the openings of both of the passages and preventing the escape of gas through the same. The valve is covered with a fine bronze powder to form a metallic coating for the purpose of preventing it from adhering to the valve seat.

Claim.—First, the arrangement of the two openings *e1* and *e2*, and the surrounding lip *e3*, or its equivalent, with the elastic valve G, as and for the purpose herein set forth.

Second, the employment of the adjustable spring H in combination with the above, for the purpose described.

Third, the valve herein described, composed of India-rubber and coated with fine bronze powder or its equivalent, for the purpose set forth.

No. 36,972.—W. H. TOWERS, of New York, N. Y.—*Improvement in Penholders.*—Patent dated November 18, 1862.—This invention consists in surrounding the lower end of a penholder with a tube composed of blotting paper or some other absorbent material in such a manner as to hold the pen and prevent the ink from soiling the fingers in writing.

Claim.—Forming said tube B of blotting paper, felt, or other absorbent material, so as to enable it to act in the double capacity of a penholder and preventive to the soiling of the fingers of the person using it, substantially as herein set forth.

No. 36,973.—F. A. TRANT, of New Britain, Conn.—*Improved Carpenter's Bench Gauge.*—Patent dated November 18, 1862.—This gauge is formed of two or more bars fitted together in one head, so as to slide one upon the other, and provided with a tongue and groove, each being secured to the head separately by means of thumb screws placed on opposite sides of the head.

Claim.—As an improved article of manufacture, a carpenter's bench gauge, viz., the two or more bars *e e* held in uniform position by means of tongue and groove *a a'*, or their equivalents, in combination with a single head *c* and set screws *d d*, substantially in the manner as described.

No. 36,974.—W. B. TREADWELL, of Albany, N. Y.—*Improvement in Stoves.*—Patent dated November 18, 1862.—Attached to the outer casing above the fire-pot is a bevelled case or bearing, upon which rests the bed piece, the latter being intended to hold the fire-brick in place over the fire-pot at the discharge of the feed cylinder. Above the fire-pot is a cylindrical section of the supply pipe, upon which rests a funnel or hopper-shaped receiver, the latter having its upper edge fitting closely to the interior of the outer casing, leaving a space below this point between the supply cylinder and the casing.

Claim.—First, the bed piece F constructed as described, and operating in the manner set forth.

Second, the combination and arrangement of the bed piece F with the fire-pot C, illuminating chamber D, and supply chamber G H, substantially as herein set forth.

Third, the supply cylinder G H, constructed and operating substantially as herein set forth.

No. 36,975.—G. W. WILSON, of Galesburg, Ill.—*Improvement in the Mode of Tightening Followers to Mill Spindles.*—Patent dated November 18, 1862.—Between the bush and follower is placed a doubly curved spring, the upper end of which passes over the upper end of the bush, and the lower end being furnished with a nut and screw, so that by turning up the latter the spring is drawn down into the wedge-shaped cavity, by means of which the necessity of removing the stone for the purpose of tightening or loosening the followers is obviated.

Claim.—The re-curved spring A, constructed as described, in combination with an adjusting nut E and follower B, when arranged and operated as and for the purposes set forth.

No. 36,976.—ABRAM ACKER, of Ramapo, N. Y., assignor to J. S. WANAMAKER & CO., of Hohokas, N. J.—*Improvement in Spring Butt Hinges.*—Patent dated November 18, 1862.—The enlarged cap used in this invention consists of a cylindrical head perforated around its periphery to receive a lever, which is used to adjust the cap in regulating or reversing the action of the spring. Under the head is a toothed neck, which serves to receive and hold the upper end of the spring, and also to receive the coupling pin, which connects the cap and the spring with the upper portion of the hinge. By turning the cap around and securing it with the pin between the teeth of the neck, the tension of the spring may be increased or diminished as desired.

Claim.—The device for adjusting the spring *c*, consisting of the enlarged cap *a2*, reduced toothed or perforated portion *g*, pin *i*, and shoulder *p*, arranged as and for the purposes herein set forth.

No. 36,977.—T. W. WISNER, of Osceola, Mich.—*Improvement in Trying Squares.*—Patent dated November 18, 1862.—This invention consists in the application of an adjustable metallic face plate to the stock of a trying square, so that by means of a screw passing through the lower end of the stock and into the face plate, the latter may be adjusted to the proper angle in relation to the blade.

Claim.—The adjustable face plate C applied to the stock B of the square, substantially as shown, and operated by the screw D, or its equivalent, for the purpose specified.

No. 36,978.—BENJAMIN HORN, of Flemington, N. J., assignor to Himself and J. P. RITTENHOUSE, of the same place.—*Improved Washing Machine.*—Patent dated November 18, 1862.—Upon the ends of a shaft supported by uprights attached to the sides of the tub are hung rods extending down nearly to the ground, and connected together by a tie at their lower ends. From these rods is suspended a box for holding any required weight to be applied to the squeezing rollers. Within the box is a series of corrugated rollers working upon a corrugated rubber. Beneath the tub is arranged a treadle, which is connected with the rods that sustain the weighted box, so that the operator may, upon pressing the treadle with his foot, cause the rollers to rise for the insertion of clothes into the tub or their removal therefrom.

Claim.—First, the combination and arrangement of the rods K and weight box L with the shaft C, arms E, rocking pieces F, and fluted rollers G, substantially as and for the purpose herein set forth.

Second, the arrangement of inclines *o* and *b*, brake I, shaft C, rollers G, and treadle M, substantially as and for the purpose herein described.

No. 36,979.—C. S. HUTCHINSON, of Burlington, N. J., assignor to W. T. HOPKINS, of the same place.—*Improvement in Hooped Skirts.*—Patent dated November 18, 1862.—This invention consists in the employment of a pad and straps connected to the waist belt and front tapes of a hooped skirt, so arranged that the rear part of the skirt may retain its desired form, and the clothing on the outside of the same may be removed from contact with the waist and sustained by the pad, for the purpose of relieving the wearer from the inconvenience of the weight sustained by the waist belt alone.

Claim.—The pad H and straps G and G', or the equivalents to the same, when connected to the waist belt and front tapes B and B', and arranged for application to the wearer's person, substantially as set forth.

No. 36,980.—T. W. IRVIN, of Indianapolis, Ind., assignor to W. C. HOLMES and EDWARD DUNN, both of Marion county, Ind.—*Improvement in Grain Separators.*—Patent dated November 18, 1862.—The tube into which the grain is fed, and through which the draught is made to pass, is formed with two offsets, making three sections, and at the angle or shoulders formed by the offsets are arranged a series of valves and dampers for regulating the amount of air entering the tube and preventing a too large accumulation of grain. The grain is fed to the tube from a diverging corrugated hopper.

Claim.—The combination of the corrugated hopper K with the angular tube F E D and valve H H O *a* and *b*, all arranged and operating substantially as and for the purpose shown and described.

No. 36,981.—JOHN MCKINNELL, of London, England, assignor to JOHN HYSLOP, of Ten Saint, Judes's square, Bradford.—*Improvement in Ventilating Apparatus.*—Patent dated November 18, 1862.—This apparatus consists essentially of two tubes arranged concentrically with each other and opening at their lower ends into the space or apartment to be ventilated.

These tubes communicate with the external atmosphere at different levels, the vitiated air rising up the central tube and passing off at the higher level, whilst the fresh air enters the annular passage between the inner and outer tubes at a lower level and descends into the space or apartment below. Both passages are provided with suitable valvular mechanism for regulating the currents, that of the outer passage at the same time serving to deflect the downward current of fresh air and spread it out horizontally so as to prevent partial draughts.

Claim.—First, a ventilator for apartments or other enclosed spaces, composed of two concentric tubes or passages opening below in the ceiling or top of the apartment or enclosed space and communicating with the external atmosphere at different levels, when used in connexion with a deflecting flange I, (adjustable or otherwise,) to distribute the pure air within the apartment, substantially as set forth.

Second, the employment or use, in the ventilator described, of an adjustable flange or annular plate, which serves to close the passage either wholly or partially, when required, and which when open acts as a deflector to deflect and spread out the current in a horizontal direction, as hereinbefore described.

Third, a ventilator for apartments, composed of two concentric tubes or passages opening below in the ceiling or top of the apartment or enclosed space and communicating with the external air at different levels, when used in combination with a horizontal tube or tubes Q, for the ingress of pure air, substantially as and for the purpose set forth.

No. 36,982.—DANIEL SHERWOOD, of Lowell, Mass., assignor to Himself and E. P. WOODS, of the same place.—*Improved Wire-Gauze Strainer.*—Patent dated November 18, 1862.—This invention is explained by the claim. The inventor says, the great advantage derived from corrugated or twilled wire cloth is, that it can be formed up readily between the dies, being elastic, and the interstices for the passage of the liquid being perfectly preserved.

Claim.—As an improved article of manufacture, a strainer for liquids made of corrugated or twilled wire cloth, substantially as described.

No. 36,983.—SIDNEY SQUIRES, of Boston, Mass., assignor to C. B. BOYCE & Co., of the same place.—*Improved Clothes-Wringing Machine.*—Patent dated November 18, 1862.—This invention consists in so arranging the parts by which the wringer is secured to the wash-tub, in connexion with the springs by which the rolls are pressed together, that the said springs shall only be brought into play when the wringer is secured to the tub, and when the screws which confine it to the tub are loosened the springs shall be thrown out of play, so that the rolls are not pressed together except when in use.

Claim.—The combination of the levers L and H, constructed in the manner substantially as described, for the purpose specified.

No. 36,984.—S. W. WOOD, of Cornwall, N. Y.—*Improvement in Revolving Fire-arms.*—Patent dated November 18, 1862.—This invention consists in hollowing out or cupping a stationary or fixed breech secured to or forming part of the frame or stock of a pistol, into which the rear end of a revolving cylinder is received and which encases the heads of the cartridges. Within the hollowed breech is a stationary inclined plane which serves to relieve the chambers of the empty cases, and is so constructed that when the cylinder revolves with the gate closed, the cartridges will pass over the inclined plane, and again be forced to their places in the chambers when in position to be discharged.

The hammer is operated and the cylinder revolved by means of a forked spring pawl in one piece, pivoted to and operated by the trigger, one of the forks or prongs serving as a spring to allow its end to pass over the notches on the end of the cylinder in revolving it, so as to present the chambers with their cartridges in succession to the barrel, and to permit the other end of the fork taking into the notches in the face of the hammer, so as to be forced therefrom in discharging the piece.

Claim.—First, hollowing or cupping the stationary or fixed breech secured to or forming part of the frame or stock of a revolving pistol, and receiving and encasing the end of the cylinder and heads of the cartridges, having a fixed or stationary inclined plane, the whole arranged and constructed as herein described.

Second, in a self-cocking and discharging pistol, revolving the cylinder and operating the hammer by means of a forked spring pawl in one piece, arranged as set forth.

No. 36,985.—J. E. ATWOOD, of Bucksport, Maine.—*Improvement in Steam-Engines.*—Patent dated November 25, 1862.—The object of this invention is the construction of a steam-engine which will generate steam no faster than is necessary for use, and by which the necessity of a boiler, as also of a steam chest, is dispensed with. Reference to the specification and drawings will be necessary for an understanding of its construction and operation.

Claim.—First, the combination of the generator S S with the cylinder A, when constructed substantially as described for the purpose set forth.

Second, the combination and arrangement of cylinders A with cylinders *x x*, steam generator S S, reservoir F F, and levers J J, operating in the manner and for the purpose substantially as set forth.

Third, the combination of pump E, spiral spring C C, and eccentric D D, in the manner and for the purpose substantially as described.

No. 36,986.—S. S. BARTLETT, of Providence, R. I.—*Improvement in Bolsters for Spinning Frames.*—Patent dated November 25, 1862.—This invention consists in cutting a left-handed screw-thread in the bottom part of the bolster by means of a gear, or wheel, in such a manner as to leave the lower part of the bearing surface of the bolster perfectly smooth and of the same size as the upper part, and without disturbing the bearing of the spindle: the object of the screw thread being to prevent the oil from running out at the bottom of the bolster.

Claim.—An improved bolster in which the screw-thread is cut by a gear or wheel in such a manner as not to vary the internal diameter of the bearing surface of the bolster, but so as to leave the diameter the same throughout as it was before the screw-thread was cut.

No. 36,987.—J. L. BATES, of Providence, R. I.—*Improvement in Packing for Steam Engines.*—Patent dated November 25, 1862.—This packing is composed of a fillet or strip of cork upon which is placed first an open braiding of twine, over which is a covering composed of twine covered with soft cotton or other fibrous material.

Claim.—First, the combination of the fillet or strip of cork A, and the covering *b*, composed of twine covered with soft cotton or other soft fibrous material, substantially as herein specified.

Second, the braiding *c*, applied in combination with the fillet or strip A and covering *b*, substantially as and for the purpose herein specified.

No. 36,988.—EDWARD BEANES, of Havana, Cuba.—*Improvement in the Refining and Manufacture of Sugar.*—Patent dated November 25, 1862.—This invention consists in the use of liquid ammonia instead of lime-water or milk of lime, for neutralizing the acid developed in the process of refining sugar.

Claim.—The use of ammonia for neutralizing the acid developed in the manufacture and refining of sugar, substantially as herein described.

No. 36,989.—N. A. BOYNTON, of New York, N. Y.—*Improvement in Heaters.*—Patent dated November 25, 1862.—The magazine consists of a cylinder placed upon the fire-pot, and is surrounded by a radiating chamber but not in contact with it, thus leaving a space between the two. The radiating chamber extends from the top of the magazine to near the top of the fire-pot. Attached to the upper part of the fire-pot are a series of flues communicating at their upper ends with the radiating chamber.

Claim.—First, the open air space *a*, between the magazine C and the radiator G.

Second, having the radiating chamber G made to extend from the top of the magazine nearly to the top of the fire-pot, in combination with the air space *a*, as herein shown and described, so as to enclose or nearly enclose the magazine, but leaving an open space between the base of the radiator and the fire-pot for the entrance of air and its contact with the fire-pot, with room for the rise and discharge of the air through the space *a*, all as set forth.

Third, the combination of the radiator G, made as above described, and the air space *a*, with the magazine C, the fire-pot A, and the flues F, in the manner herein shown and described.

No. 36,990.—J. S. BROOKS, of Rochester, N. Y.—*Improvement in Sad-iron Heaters.*—Patent dated November 25, 1862.—This device consists of an oblong pan which is intended to occupy the space of the two front holes of a cooking range or stove, when the division plate is removed, and is of sufficient depth to admit of the sad-irons being placed below the cover. The cover is provided with slots to admit the handles to slide within them, and the pan is supported upon the stove by means of a flange on its upper outer edge.

Claim.—The sad-iron heater constructed as shown and described, and forming a new article of manufacture.

No. 36,991.—O. L. BROWN, of Boston, Mass.—*Improvement in Machines for Setting Up Types.*—Patent dated November 25, 1862.—This invention consists in placing the type in a case formed of cells of such a width as to admit of a single row of type, and using in connexion therewith a sliding stick, together with a mechanism arranged in such a manner that the stick may be shoved along below the case, and brought in a proper relative position with any of the rows of type in the case, the type to be discharged from the case and properly deposited in the stick.

Claim.—First, the employment or use of a type case A, provided with a series of type cells *a*, in combination with a sliding stick C, provided with a plate H, plunger *t* and slide S, so arranged that the stick may be moved along, and its space *n* adjusted in line with any of the type cells *a* in the case A, and the type discharged from the case into the stick, substantially as herein set forth.

Second, operating the slide S, and plunger *t*, through the medium of the lever P, provided with a spring Q, a pawl *b* and a lever T, provided with a notch *a'*, and having the plunger rod U attached to its upper end, all arranged as shown, whereby the types are forced upward and out from the cells *a* of the case A, and into the space *n* of the stick, as set forth.

Third, providing the stick C with an adjustable side *a''*, and an adjustable end plate I', in connexion with a self-adjustable bar K, placed in the space *n*, and secured in position by the pawl O and rack *o*, whereby the stick may be adapted for receiving lines of types of greater

or less length and width, as may be required, and the lines of type when "set up" forced into the stick, as herein described.

No. 35,992.—A. H. CHAPLIN, of Adrian, Mich.—*Improvement in Horse Rakes.*—Patent dated November 25, 1862.—This invention consists in attaching to the shafts of an ordinary revolving horse rake, two yokes provided with slots through which pass bolts by which they are secured to the shafts in such a manner that the latter can be adjusted to any desired height. To the rear end of the handles are bolted springs, which, as the handle is raised, strike the teeth near their junction with the beam, and thus press down the points to the ground, whereby the head is caused to revolve.

Claim.—The yokes G G and springs Q Q, arranged to work in joint operation with handles D D, shafts H H, and teeth C C, as above described and set forth.

No. 35,993.—ALINZOR CLARK, of Saint Johnsville, N. Y.—*Improvement in Apparatus for Cutting Tined Implements from Metal Plates.*—Patent dated November 25, 1862.—This machine is constructed of a pair of dies to cut the blanks for two forks, rakes, or tined hooks, from a piece of steel plate, in such a manner that the metal cut from between the tines of each, forms the tines of the other, thereby enabling the forks to be made without any material waste of stock. The dies for cutting out the blanks are constructed of a series of plates set up edgewise with interposed packing plates, and secured together in box-like stocks by means of set screws.

Claim.—The construction of each die of a series of cutting plates *d d e* or *d' d' e'*, and interposed packing plates *f f* or *f' f'*, the whole secured together in a box or stock B or B', by set screws *g g* or *g'*, or their equivalents, substantially as herein set forth.

No. 35,994.—J. E. EARLE, of New Haven, Conn., assignor to Himself and GEORGE S. LESTER, of same place.—*Improved Clothes Frame.*—Patent dated November 25, 1862.—This device consists of a bracket to be secured to a wall or other convenient place, and provided with a perpendicular spindle, upon which are placed two or more sockets, one above the other, and each independent of the other, and so arranged as to turn freely on the spindle. In each socket is placed a bar, upon which clothes or towels may be hung.

Claim.—The combination of bracket A and spindle D with the sockets F and bars G, constructed and operating in the manner and for the purpose substantially as described.

No. 35,995.—PERRY DICKSON, of Utica, Minn.—*Improvement in Propellers for Land Conveyance.*—Patent dated November 25, 1862.—At the rear of a wheeled vehicle or sled is arranged a rock shaft, to each end of which is attached an arm provided with a pointed shoe. The rock bar is oscillated by the piston rod of the engine through the medium of a cross-head, a slide, and pendant, and horizontal rods. The slide is so arranged as to be capable of being adjusted higher or lower upon the pendant rod, and thus regulates the length of stroke of the rock bar, so that in ascending eminences the speed may be decreased and a proportionate increase of power obtained.

Claim.—The applying of the power of the engine to the rod I of the rock bar J, through the medium of the slide G, pendant rod F, and cross-head E, the slide being adjusted on the rod F, and all arranged substantially as and for the purpose herein set forth.

No. 35,996.—ELBRIDGE GALE, of Kendall, Ill.—*Improvement in Portable Fences.*—Patent dated November 25, 1862.—This invention consists in constructing the wire fence in sections, so looped or jointed together as to be easily folded for transportation. The wires are secured to standards set obliquely to each other in the ground or upon a frame prepared for the purpose.

Claim.—A wire fence constructed in sections, with the posts set obliquely and braced as described, the whole constructed and arranged in the manner and for the purpose as set forth.

No. 35,997.—A. HEAVENER, of Plano, Ill.—*Improvement in Water-proof Thresholds.*—Patent dated November 25, 1862.—Placed over a groove in the metallic threshold is a strip of metal or a valve curved on its front edge to cover the circular portion of the threshold. Under the valve is also a plate curved at its edge, so as to form, with the valve and curved portion of the threshold, a hinge. Secured to the valve is a spring which, when the door is closed, causes the valve to turn up into a cavity in the bottom of the door, where it is held against a plate on the door, the valve lying flat when the door is opened.

Claim.—The valve G with hinge I and spring J, as described; also the groove or channel K, as described, and for the purpose specified.

No. 35,998.—C. B. INGERSOLL, of Morris, Ill.—*Improvement in Cultivators.*—Patent dated November 25, 1862.—This invention relates to that class of cultivators which are designed to cultivate both sides of the rows at once, and made high enough to pass over the growing corn; and it consists in so constructing and arranging the doubletree with the draught pole and other parts as to transfer the draught from the upper part of the machine to or below the centre, so that a more even and easy draught may be obtained.

Claim.—The combination and arrangement of the draught pole D, the doubletree A, the beams E, the cross-beam F, the standards G, the supports C, and the whiffletrees B, when all are constructed, arranged, and operating substantially as and for the purposes herein delineated and set forth.

No. 35,999.—WILLIAM JONES, of Wilson, Minn.—*Improvement in Ploughs.*—Patent dated November 25, 1862.—This plough is constructed with a double mould board, provided with the proper shares, land sides, and standards, the latter being attached, at their upper ends, to a semicircular plate, which is secured to the under side of the beam by a pivot bolt and catch, operated by a lever, so that the mould board may be readily turned and secured to either side of the beam to form a right or left hand plough, as may be desired.

Claim.—The combination of the mould boards C C, shares F F, land sides D D, and standards E E G, with the plate H, guide plate J, lever K, and beam A, all in the manner herein shown and described.

No. 37,000.—T. B. KELLY, of Harmonsburg, Pa., and L. W. KELLY, of Brunswick, Ohio.—*Improvement in Blacksmiths' Tools.*—Patent dated November 25, 1862.—This instrument is designed for paring the hoofs of horses before shoeing, and it consists of a metallic handle or stock flattened out near one end. In this flattened part is a slot, through which passes a square-headed screw bolt, which latter serves to secure a knife blade to the flattened portion. Beyond the flattened portion the handle or stock is curved, and to the same is hinged a claw, which is designed to catch under the hoof and serve as a fulcrum in operating the knife.

Claim.—The construction of the handle A A with the slot therein at F F, and claw B attached thereto by the joint C in combination with the knife blade E, when the same are constructed as described and for the purpose set forth, and in the aforesaid combination.

No. 37,001.—LEWIS KOLLOFF, of Brooklyn, N. Y.—*Improvement in Devices for Closing Gates.*—Patent dated November 25, 1862.—To the post which supports the gate is attached an arm provided with a socket or stop, and to the gate frame is attached a projection provided with a pointed screw. In the arm on the post is then inserted the pointed end of a bar, while the other end receives the screw of the projecting lug on the gate, so that the weight of the gate acting upon the bar serves to close the gate after being opened.

Claim.—In combination with a gate or door the socket on the jamb or post A, the bar G, and the adjusting mechanism *b c*, substantially as described and for the purpose set forth.

No. 37,002.—E. V. LAWRENCE, of Brooklyn, N. Y.—*Improvement in Rotary Disk Measures.*—Patent dated November 25, 1862.—This invention consists in the combination with the rotary disk, and with the cog-wheels which transmit the motion of said disk to the index hands, of a case of known width, which nearly encloses the whole measure, and which is provided with a pointer in such a manner that the disk can be started accurately from any desired point. To the periphery of the rotary disk is applied a strip of India-rubber or leather for the purpose of preventing the disk from slipping while being carried over the surface to be measured. Applied to the case which encloses the measuring disk and wheels is a pointed radius bar in combination with a suitable scale marked on the dial-plate of the case in such a manner that, by inserting the point of the radius bar in the point of the angle, and carrying the disk over the arc measuring said angle, the number of degrees containing the arc, and also its length, may be readily determined. A compass is inserted into the handle, which latter serves to carry the disk over the surface to be measured, so that the direction in which the disk moves can be observed at every point.

Claim.—First, the arrangement of the cylindrical case B with its pointer *a'* in combination with the rotary disk A, wheels *b b' c c' d d'*, and index hands C D, all constructed and operating in the manner and for the purpose shown and described.

Second, the application of a strip *f* of India-rubber or other suitable material to the edge of the rotary disk A, when said disk is used as and for the purpose set forth.

Third, the arrangement of the radius bar E with the point *g* in combination with the case B carrying the measuring disk, wheels, and indices, all constructed and operating substantially as and for the purpose described.

Fourth, the use of a compass in combination with the handle F of the case B, as and for the purpose specified.

No. 37,003.—HENRY LOEWENBERG, of New York, N. Y.—*Improvement in Hoop Skirts.*—Patent dated November 25, 1862.—The body of the skirt is made of arcs or parts only of hoops, so arranged as to leave intervals or spaces between the arc of each range, so as to enable the skirt to readily fold together under a person while in a sitting position.

Claim.—An improved hoop skirt having its body made with arcs or parts of hoops, instead of entire hoops, arranged in manner or with reference to each other and supported by bands, elastic or otherwise, so as to operate substantially as specified.

No. 37,004.—T. J. MAYALL, of Roxbury, Mass.—*Improvement in Revolving Fire-arms.*—Patent dated November 25, 1862.—The nature and object of this invention will be understood from the claim.

Claim.—In fire-arms of otherwise ordinary construction and operation, the employment of changeable breeches or breech sections adapted for reception of different kinds of ammunition, in combination with a hammer, so constructed and arranged in relation to the said breeches or breech sections as to strike, when operated, both the percussion cap and the head of the solid cartridge in the proper position for causing the ignition of either charge used, as the case may be.

No. 37,005.—WILLIAM NEVINS, of Irving, N. Y.—*Improvement in Cultivators.*—Patent dated November 25, 1862.—Upon the sides of the central beam are placed wings provided with teeth on their under surface and secured at their forward ends by hinges, and at the rear by over-lapping bars rendered adjustable by means of holes and a bolt. On the upper surface of the wings is a brace attached at each end by a bolt passing through one of a series of holes in the wings, by which means the latter may be set to any desired angle to pass between the rows of plants.

Claim.—The rigid angular wings C C connected with the beam A, and made adjustable by means of the brace bar D, eye bolts *d d*, and adjusting holes *f f*, or their equivalent devices, the whole arranged, combined, and operating substantially as and for the purposes herein set forth.

No. 37,006.—DEXTER PETTENGILL, of Delhi, N. Y.—*Improved Slide for Breast Straps for Harness.*—Patent dated November 25, 1862.—This device consists of a metallic slide attached to the breast strap of a harness for the purpose of preventing the said strap from being worn by the ring which is attached to the neck yoke or pole chain.

Claim.—The slide and its application to the breast straps of harness, in the manner and for the purposes set forth in the above specification.

No. 37,007.—W. B. RHOADS, of South Dedham, Mass.—*Improved Wringing Machine.*—Patent dated November 25, 1862.—Upon the outer side of the upper end of each standard is hinged a spring extending across the machine and catching at its opposite end under notches on a plate upon the opposite standard. These springs bear upon short pillars which rest on the journals of the upper rollers, and thus serve to regulate the pressure upon the said rollers. The machine is attached to the tub by means of a casting formed with three prongs, in connexion with a retaining nut and screw.

Claim.—First, lever springs as means for producing pressure on and allowing yield of the moving roller of wringing machines, substantially as set forth.

Second, the three-pronged device *m m m'* with the shouldered screw J, nut S, and wringing machine standards A A, substantially as and for the purpose set forth.

No. 37,008.—J. M. RILEY, of Newark, N. J.—*Improved Furniture Caster.*—Patent dated November 25, 1862.—This invention consists in the employment of an anti-friction band or collar placed on the arbor of the caster and fitted within the tube of the same at a point between the top of the fork in which the roller is placed and the spring or fastening which secures the arbor in the tube. The said spring consists of a piece of steel fitted within a recess in the arbor near its upper end.

Claim.—The band or collar D when applied to the arbor B at the junction of the fork C, and used in combination with a spring E or other fastening placed between the band or collar D and the upper end, bearing, or centre *a'* of the arbor, as herein set forth.

No. 37,009.—CYRUS ROBERTS, of Three Rivers, Mich.—*Improvement in Cultivators.*—Patent dated November 25, 1862.—This invention relates to that class of cultivators in which the wheels are mounted on a crank axle, so that the machine may be raised and lowered, and it consists in combining with the driver's seat both a foot and hand lever, so arranged that the driver may from his seat readily grasp the one and bear upon the other, and that by means of his own weight the machine may be readily raised when desirable.

The side pieces of the frame terminate just at the rear of the wheels, and have secured to them removable projecting arms to which the outer feet or teeth are attached, and so arranged that their distance apart can be easily regulated and the teeth be made to run in the track of the wheels.

Claim.—First, the combination of a foot lever, hand lever and crank axle with a driver's seat, when arranged for joint operation, substantially in the manner described for the purpose set forth.

Second, the combination of the hind feet K with the removable projecting arms K', when arranged and operating substantially as and for the purposes described.

No. 36,010.—CYRUS ROBERTS, of Three Rivers, Mich.—*Improvement in Cultivators.*—Patent dated November 25, 1862.—This invention consists in mounting the feet, to which the teeth are attached, in a frame having a lateral sliding movement in combination with stay chains attached to a fixed point on the main frame of the machine, so that the feet may be always kept parallel to the same plane without regard to their lateral play.

The sliding frame is made to move on a transverse rod by means of a lever attached to the frame and extending back so as to be operated by the driver's foot.

Claim.—First, mounting the feet in a frame having a lateral sliding movement, substantially as described, in combination with stay chains attached at one end to the feet and at the other to a fixed point on the main frame, as set forth, for the purpose of keeping the feet always in the same plane relative to the frame or to the path of the machine, notwithstanding said lateral movements.

Second, the combination of the rod G', sliding frame *g*, and lever *g*3, when arranged and operating substantially as and for the purpose described.

No 37,011.—EBEN A. SAWYER and J. B. NICHOLS, of Portland, Maine.—*Improved Apparatus for Reefing Topsails and Courses of Ships.*—Patent dated November 25, 1862.—This invention consists of an arrangement of looped "spilling" lines running down from the topmast cross-tree through a jackstay of the topsail yard, and then behind and through the topsail or close reef thereof, and then up in front of the topsail to the topmast cross-tree, so that when the topsail yard is lowered away, the wind is caused to "spill" out of the topsail, and the said sail placed in a condition for being conveniently reefed from the deck.

Attached to the topsail yard or to the fore or main yard are a series of brail lines running down in front of and through the sail, to and through a series of blocks, and thence to the deck, so that the topsail may be reefed simultaneously with the lowering of the yard from the deck without the necessity of employing a rolling yard or a double top-sail yard.

Claim.—First, running the spilling lines H through reef band *b*, and through the topsail G at points near the topmast B or centre of the sail G, and extending their ends in front and in rear of the sail, up to the cross-tree I, substantially in the manner and for the purpose described.

Second, providing the blocks *g* on the yards of topsails and courses and arranged brail lines J J to pass independently of one another from the top of the yards down in front of the sails, through the sails, up behind the sails, over the blocks *g*, and down to the deck, in the manner and for the purpose described.

Third, the arrangement together on the topsail of the spilling lines and brail lines, in the manner and for the purposes described.

No. 37,012.—A. B. SPROUT, of Hughesville, Pa.—*Improvement in Horse Rakes.*—Patent dated November 25, 1862.—At the rear of the axle and parallel with the same is a bar provided with a series of metal loops or guides through which the curved teeth pass. The teeth are attached at their inner ends to hubs placed loosely on a shaft J that is connected at its ends to arms attached to the guide bar.

Parallel with the guide bar is a bar L which rests upon the teeth, and is provided with a weight at each end. The said bar is connected by arms to the shaft J, the arms being fitted loosely on the shaft and passed through eyebolts in the bar L, which is provided with clamp nuts, so that the bar may be made to rest upon the teeth at any distance from the shaft, and thus hold them down with any required force to adapt them to work with light or heavy hay.

The guide bar is turned by means of a lever so as to raise the teeth in a curved path backward and upward, and thus readily disengage them from the hay.

Claim.—First, securing the teeth H in position by means of the fulcrum bar F, connected by the arms K K to the shaft J, as herein shown and described.

Second, poising or balancing the teeth H near the centre of the same upon a fulcrum bar F, hinged to the main frame in the rear of the shaft J and axle A, substantially as set forth, so as to adapt the teeth to be more readily raised by the lever M.

Third, securing the bar L adjustably upon the arms K, so that the said bar may be set in or out, in order to adapt the rake to work with light or heavy hay.

Fourth, providing the bar L with the removable weight *b*, substantially as and for the purpose set forth.

No. 37,013.—O. G. STILLMAN, of Fabius, N. Y.—*Improved Means of Affixing Defensive Armor Plates to Marine Batteries.*—Patent dated November 25, 1862.—To the sides of a vessel are bolted a series of ribs provided with grooves on their upper and lower edges, leaving an outer projection. Fitting upon these ribs is a series of plates grooved also on their upper and lower edges, so as to fit upon the ribs and present outwardly a smooth surface and entirely concealing the ribs

Claim.—Combining any desired number of groove-edged casing plates *a a* with each other and with the exposed surfaces of a vessel by the aid of a series of grooved-edged and concealed ribs *b b* and the requisite number of stay-bolts, all substantially as herein set forth.

No. 37,014.—N. F. STONE, of Athens, Ill.—*Improvement in Machines for Gumming Saws.*—Patent dated November 25, 1862.—This invention relates to a saw-gumming device of that class in which rotary cutters are employed. The stock of the machine is made of cast metal, and is formed of two cheek-pieces, one of which has a shank provided with a nut at its lower end, through which passes a feed screw, the latter being parallel with the shank.

Between the front sides of the cheek-pieces and also between guides is fitted a frame D, which is allowed to work freely up and down, and the upper end of the head screw is connected to the lower end of the frame, so that the latter may be readily raised and lowered.

Through the said frame passes a horizontal shaft provided with a cutter formed of a series

Through the said frame passes a horizontal shaft provided with a cutter formed of a series of teeth upon a cylinder. The bearings of this shaft are fitted in recesses in the frame, where they are retained by caps which work in contact with the front sides of the cheek-pieces, so that the bearings of the shaft are retained in proper position and the shaft prevented from having any play.

Claim.—The stock A formed of the two cheek-pieces *a a'*, set screw C and shank *b* in combination with the frame D, provided with the rotary cutter F and the feed screw B, passing through a nut *c* on shank *b* and fitting in the frame D, all arranged as and for the purpose herein set forth.

Further, the particular manner of attaching the frame D to the stock A, to wit, by having the caps *k k* of the bearings *i i* of the cutter-shaft E bear against the front sides of the cheek-pieces *a a'*, and having the front side of the framework within the guides *f f h h* formed at the ends of arms *e e g* connected with the upper and lower ends of the cheek-pieces, as and for the purpose set forth.

No. 37,015.—ORIN SWEET and M. E. HICKS, of Providence, R. I.—*Improvement in Packing for Rotary Pumps.*—Patent dated November 25, 1862.—This invention consists in inserting two rings of bronze-metal into the head of the engine, where they are made to fit tightly and are attached to cog-wheels which work upon threads cut upon the hubs. The cog-wheels are turned in opposite directions by means of power applied to a small pinion gearing into one of the cog-wheels.

Claim.—The insertion of these bronze-metal rings into the engine head, and the peculiar mode, by means of the cog-wheels, of adjusting the said rings, which serve as a packing for the pumps or engines, producing the effect of keeping the pumps or engines water-tight.

No. 37,016.—C. R. TUTTLE, of New Brighton, Pa.—*Improvement in Churns.*—Patent dated November 25, 1862.—In this churn the upper end of the central dash-rod is supported at a point midway between the pinion wheels in a box which is furnished on two opposite sides with dovetailed or wedge-shaped projections adapted to fit corresponding grooves in the metallic support or bracket, and thereby to hold the dash-rods properly in position for their pinion wheels to gear into the main driving gear wheel, and also to admit of their ready removal. One of the dashers is supported by a screw clamp upon two rods, which latter are secured at their ends in the under and upper sides of a pinion wheel and collar respectively, so that the dasher may be adjusted higher or lower within the cream vessel, as may be desired.

Claim.—First, the box H, provided with dovetail or wedge-shaped projections *c c'*, adapted to fit corresponding mortises in a metallic support or bracket F, when combined and arranged to operate in the manner and for the purpose specified.

Second, the wing or dasher K, and clamp *m*, provided with set screw *n*, in combination with the rope *g g*, when arranged to operate in the manner and for the purpose specified.

No. 37,017.—DANIEL TREADWELL, of Cambridge, Mass.—*Improvement in Devices for Firing Cannon.*—Patent dated November 25, 1862.—In the portion of the breech of the gun which contains the touch-hole or vent is screwed a steel plug through which the vent is bored and extending to the inner surface of the gun. The upper part of the vent is enlarged to form a recess into which the priming cap is placed. In connexion with the above is used a "set" or plug, which serves both as a vent stopper and a striker for igniting the primer. It is attached to a set stock or lever which is jointed at one end to a stud that is screwed into the gun, and is held down at the other end against the discharge of the gun by a button or steel disk having a segmental cut-off at one side and rotating upon a steel bolt. In the vent is placed a fulminating primer, provided with a casing of thin copper or other suitable material, that by its expansion against the sides of the recess or vent closes the joint to prevent the escape of the gas, the primer being ignited by a blow applied to the exterior of the set or plug.

Claim.—The employment, in combination with the vent of a gun, of a recess or receptacle upon the exterior thereof for containing a primer, and a vent stopper for closing the same, and a primer with an expanding case which serves as a packing to close the joint and prevent the escape of the gas, substantially as described.

No. 37,018.—S. H. TITUS, of St. Louis, Mo.—*Improved Coating for Oil Barrels and Casks.*—Patent dated November 25, 1862.—This invention consists in the employment of a mixture of sulphuric or other acid, in which is dissolved a proper portion of glue, applied as a coating to the interior of wooden casks or other vessels for containing petroleum oil.

Claim.—The solution of gelatine compounded substantially as specified, and its application to the interior of casks and other vessels, in the manner and for the purpose substantially as described.

No. 37,019.—L. B. WATERMAN, of Chicago, Ill.—*Improvement in Cultivators.*—Patent dated November 25, 1862.—This invention consists in so constructing the frame as to admit of widening the space between the two lower wings so as to avoid breaking down the hills

when the latter are not in line. The ploughs are raised by means of levers operated by the driver's feet in connexion with chains passing over pulleys and attached to the lower frame. At each end of the axle is a grooved pendant which is fitted to slide in a corresponding upright, by means of which the axle may be raised and lowered, the same being secured in position by a set screw. The rear ends of the frame are connected by an adjustable bow which may be raised or lowered as circumstances require.

Claim.—First, the peculiar arrangement of the beams J K M and the bar L, in combination with the upper framework, when operating substantially as described and for the purposes specified.

Second, the arrangement of the lever I, the chain *h*, and the pulley H, when the same are used in connexion or combination with the grooved axle attachment E and the slide F, the whole being arranged and operating as and for the purposes set forth.

Third, the adjustable bow G, when arranged with the bar J, as and for the purposes set forth and delineated.

No. 37,020.—L. W. WILLIAMS, of Nevada, Cal.—*Improvement in Quartz Crushers.*—Patent dated November 25, 1862.—This invention consists in constructing the inside bottom of circular grinding beds, in which partially reduced quartz rock is to be ground, of a series of inclined or curved surfaces over and in contact with which are made to pass a series of segmental grinders under pressure of springs placed over them, the grinders being attached to levers in such a manner as to admit of their being alternately raised and lowered.

Claim.—The segmentary grinders G G G G, or their equivalent, in combination with the inclined or inclined curved surfaces I I I, operating substantially in the manner and for the purposes hereinbefore set forth.

Also, the springs S S S S, or their equivalent, in combination with the grinders G G G G, and the inclined or inclined curved surfaces I I I, the whole operating substantially in the manner and for the purposes hereinbefore described.

No. 37,021.—JOHN WILLISTON, of Vallejo, Cal.—*Improvement in Hose Coupling.*—Patent dated November 25, 1862.—This device consists of two cylindrical metallic sections, on one of which are two ribs, provided with projecting ends or lugs, which fit in corresponding recesses in the other section. Surrounding the recessed section is a tightening ring provided with two inclined grooves or channels on its inner surface for the passage of the projecting lugs, and formed with inclined edges, so that by inserting the section with the lugs within the opposite section, and turning the ring, the two sections are brought closely together.

Claim.—The ribs A, and lugs B, Fig. 2; the slots C C, Fig. 4; and the set or tightening ring, Fig. 5; the whole constructed and operating substantially as herein described and set forth.

No. 37,022.—LORENZO WINSLOW, of Rochester, N. Y.—*Improved Method of Fastening Bits of Augers in their Stocks or Handles.*—Patent dated November 25, 1862.—Within the socket that receives the bit is arranged a roller attached to one end of a rod that passes upwards and terminates in a thumb piece. This roller moves upon an inclined side in the stock and presses against the shank of the bit, being kept in position by means of a spring upon the rod, so that the bit is held firmly in the socket. By withdrawing the rod slightly the bit is released from the socket.

Claim.—The combination of the rod and spring *r s*, carrying the roller *b* with the inclined plane *d*, when arranged in connexion with a stock or handle, in the manner and for the purpose substantially as described.

No. 37,023.—G. W. WOOLLEY, M. D., of New York, N. Y.—*Improvement in Tubular Forceps.*—Patent dated November 25, 1862.—This device consists of two tubes, one placed within the other, and enclosing a stiletto, for the purpose of extracting bones or other substances from the esophagus or larynx, and for removing or curing strictures in the urethra, and for other internal operations.

Claim.—The combination of the tube *b*, tube 3, and stiletto, substantially in the manner set forth.

No. 37,024.—H. M. WYETH, of Bloomfield, Iowa.—*Improvement in Pumps.*—Patent dated November 25, 1862.—In the lower portion of the main pump box is a central partition, in the lower end of which is a longitudinal opening, having an opening into the chambers on either side, and provided with valves which open and close alternately.

Claim.—The combination of the central division piece C, with its holes *c* and *d*, and valves *f f*, with the other parts of the pump, the whole constructed and arranged for operation substantially as shown and described.

No. 37,025.—J. W. ARMSTRONG and JOHN TAYLOR, of Augusta, Ky.—*Improvement in Breech-loading Fire-arms.*—Patent dated November 25, 1862.—This invention consists in the employment of a "cleare," the stem of which works in a cavity between the bore of

the gun and the socket, and which is carried by the barrel in its revolution, and advanced or retracted by a cam groove or rib upon the breech. It also consists in a device for locking the barrel when in position for firing, and releasing it by the action of the hammer; use being made of a spring catch which slides in two parallel holes in front of the breech in connexion with a segmental plate pivoted upon the hammer-shaft, and having its periphery formed with a depression and with a prominent surface. The invention also consists in a combination of devices for connecting and disconnecting the barrel and stock.

Claim.—First, a clearer D, of any suitable form, working within or upon a cam groove or rib on the axis pin, and advanced or retracted by a rotary motion of the barrel, substantially as set forth.

Second, the segment I 4 5, employed to govern the motion of the spring catch E, substantially in the manner explained.

Third, the combination of the stud *b'* and grooves *c c'* with the axis pin C and socket *b*, to secure the barrel to the stock and permit their detachment, as explained.

No. 37,026.—SERENA E. L. CHROGAN, of Flatbush, N. Y., administratrix of ST. GEORGE CROGHAN, deceased.—*Improvement in Hoisting Machines.*—Patent dated November 25, 1862.—This apparatus consists of a lever pivoted at its centre to the upper part of a frame, upon which lever are arranged two pawls or spring-arms engaging in ratchet teeth placed upon a drum. A reciprocating motion is given to the lever by means of handles at the lower part of the frame, and connecting with each end of the lever by means of ropes.

Claim.—The combination of handles M N, lever H, spring arms F G, ratchet wheels D E, drum C, operated by ropes in manner and for the purpose herein described.

No. 37,027.—JOHN MAGEE, of Chelsea, Mass., assignor to the Norton Furnace Company, of Norton, Mass.—*Improvement in Heaters.*—Patent dated November 25, 1862.—This invention consists in supporting the air conduits or pipes which pass through the radiator by yielding joints arranged at both ends, the lower end being connected with the side of the radiator by an ordinary sand joint formed of a pipe and concentric box, the latter containing sand. At the upper end of the air pipe is also a flexible metal joint which is formed of two bowls, one of them containing lead or other metal which may be rendered fusible by the heat of the pipes; the other bowl contains sand, the object being to prevent the pipes from breaking, and also to render their joints tight when the furnace is in operation.

Claim.—Supporting each of the air conduits G by yielding joints, substantially as set forth, arranged at both ends of the same, and with respect to the top and side of the radiator, as specified.

Also, the combination of the sand and fusible metal joints, constructed and arranged substantially in manner and so as to operate together as specified.

No. 37,028.—JOHN ELLIS, of Detroit, Mich.—*Improvement in Gate Latches.*—Patent dated November 25, 1862.—This invention consists in the employment of a stop suspended by means of shoulders at its upper end upon brackets cast upon the plate attached to the gate post. Upon each side of the head of this stop are suspended catches, which are kept in place by their own gravity, so that as the gate latch enters to the stop, over an incline placed below the same, the catch on that side rises and allows the latch to drop in position, where it is securely held.

Claim.—The pendulated stop E and pendulated catches F, when arranged and operated as and for the purpose specified.

No. 37,029.—D. F. DRAKE, of Somerville, Mass., assignor to A. G. L. DRAKE, of Hampden, Maine.—*Improved Coat Sling or Carrier.*—Patent dated November 25, 1862.—This invention is explained by the claim and engraving.

Claim.—The said improved coat sling or carrier as constructed with a brace strap C, combined with a back plate A and its shoulder straps B B, and so slung or arranged below the said back plate that the said strap C, when in use, will go across the back of the wearer and below his shoulder blades, and thence underneath the arms and upward to the shoulder straps B B, substantially as described.

No. 37,030.—W. D. ANDREWS, of New York, N. Y.—*Improvement in Steam Engines.*—Patent dated December 2, 1862.—This invention consists in the employment of a valve composed of a ring connected to a hub by partitions which divide the interior of the ring into two separate spaces, and having upon that side of each partition which is in communication with the exhaust pipe at the edge next the back of the casing, a flange or lip broad enough to cover one of the ports, so that the valve and casing are enabled to be fitted up entirely in a turning lathe, and the valve, when in use, be perfectly balanced.

Claim.—The construction of the valve with flanches *l l*, attached respectively to the partitions *k k*, and arranged to operate in conjunction with the ports, all in the manner herein shown and described.

No. 37,031.—G B. BAILEY, of Greenfield, Ind.—*Improvement in Grain Cleaners.*—Patent dated December 2, 1862.—This invention consists in constructing a cylindrical screen with

a longitudinal opening in it, which is protected by a curved guard plate, arranged in such a manner over the said opening on the inner side that grain may be readily put into the cylinder and the same rotated in one direction without the grain escaping, and by rotating the cylinder in the opposite direction the grain will all escape through the guarded opening.

Claim.—The curved guard plate arranged over the space *a*, in cylinder A, as herein set forth for the purpose specified.

No. 37,032.—R. CHESTER, of Chicago, Ill.—*Improvement in Signal Lanterns.*—Patent dated December 2, 1862.—The top and bottom parts of the lantern are provided with a series of concentric circular grooves, according to the number and variety of colored glasses required. The glasses are set in frames fitting within these grooves, and the frames are moved by means of cords attached to their upper ends, so that the glass of any required color may be drawn over the plain glass without exposing the light to the outward air. On opposite sides of the lantern are hinged two wings, which are thrown open when the lamp is to be lighted, and then folded against the glass to exclude the wind.

Claim.—The combination and arrangement of the glasses *c d e*, (whether set in frames or not,) the grooves C D E, and the cords *r r' g g'*; and second, the arrangement of the wings *a*, with the glass *c*; all constructed and operating substantially as and for the purposes delineated and set forth.

No. 37,033.—C. O. CROSBY and HENRY KELLOGG, of Hartford, Conn.—*Improvement in Machines for Frilling and Crimping.*—Patent dated December 2, 1862.—This machine consists essentially of two parts, the one for forming the crimps and the other for securing them in place after they are formed, the latter being any ordinary mechanism for making stitches. The mechanism for forming the crimps consists of a crimper, which both forms the crimps and spaces them, of a holder for holding the goods at rest while each crimp is formed, and of a device for smoothing down or flattening the crimps.

Claim.—First, a crimper, acting substantially as described, to crimp goods and to space the crimps, in combination with a table or platform and a holding mechanism or holder, substantially such as described, the combination acting substantially as specified; and these are claimed also in combination with either one or two mechanisms for making stitches, substantially as specified.

Second, in combination, a crimper and a smoother, substantially such as described, and acting substantially as specified, to fold the crimps to an edge.

Third, a crimper, whose acting edge is provided with slots, substantially as described, to admit the passage of a needle to secure the crimps as formed while said crimps are being held by the crimper.

Furth, in combination with a crimper, substantially such as specified, a spring acting to force said crimper upon the goods while crimping them, and relaxing its pressure while the crimper is retreating, substantially in the manner and for the purpose specified; and, lastly an auxiliary smoother, having a mode of operation substantially such as specified in combination with a crimper and a holder or holding mechanism, substantially such as described.

No. 37,034.—D. M. CUMMINGS, of Enfield, N. H.—*Improvement in Water Wheels.*—Patent dated December 2, 1862.—The water wheel is formed of a series of angular buckets, one side being longer than the other, and secured between the outer edge of an upper circular metallic plate and a lower annular rim or plate. The wheel revolves within a circular horizontal water box or casing, provided at intervals with induction openings which are fitted with vertical chutes tapering inwardly. Between the chutes and the enclosed wheel is fitted an annular gate formed of a series of curved plates, secured to the inner edge of the upper annular plate and the outer edge of a lower annular plate, and serve to regulate the amount of water to be admitted to the wheel. Between the several chutes are a series of enclosing arc-shaped open spaces, which serve to prevent the friction of the wheel in its evolutions, by opposing the resistance of a water cushion when the wheel is submerged.

Claim.—The long and short-sided buckets A A A of my improved water wheel, made substantially as herein described.

Also, the use of a combined series of long and short-sided acute-angled buckets A A, when arranged within a water way E, which is furnished with a series of stationary tangential chutes K K, and with a connected series of movable connecting gates M M, substantially in the manner and for the purpose herein set forth.

Also, the arc-shaped open spaces *t t t*, which immediately surround my improved water wheel, the said spaces being outwardly bounded by the tangential chutes K K, and the inner side of the water way E, substantially in the manner and for the purpose herein set forth.

No. 37,035.—H. H. DAY, of New York, N. Y.—*Improvement in Elastic Breeches for Ordnance.*—Patent dated December 2, 1862.—This invention consists in inserting into the bore of the cannon, beneath the powder, an elastic breech formed of vulcanized India-rubber or other suitable material, so constructed as to confine a considerable volume of air in such a manner that it will be compressed without escaping when the charge takes place, for the purpose of permitting the breech to yield readily so as to increase the space in which the gases

caused by the explosion, may have room to expand, thereby proportionally diminishing the

No. 37,042.—RICHARDS KINGSLAND, of New York, N. Y.—*Improvement in Heaters and*

caused by the explosion, may have room to expand, thereby proportionally diminishing the intensity of the pressure.

Claim.—An elastic breech piece, composed of rubber, or its equivalent, acting in combination with confined air, the whole being placed in rear of the charge, constructed substantially as above set forth, for the purpose of lessening the pressure upon that part of the gun against which the gases press with greatest force in the act of explosion.

No. 37,036.—O. H. DUNHAM, of Washington, D. C.—*Improved Lubricator for Steam Engines.*—Patent dated December 2, 1862.—This invention relates to that class of oil cups in which two connected disk valves are operated simultaneously to close the ports below the internal reservoir, while those above the reservoir are opened, and *vice versa;* and the invention consists, in the combination with the said valves, of tubes so arranged as to afford independent and unobstructed passages for the oil and steam, whereby the steam or air from the part of the engine to be lubricated is conducted through the oil without interfering with its descent.

Claim.—The combination of the simultaneously operating disk valves B F, with the tubes *e*2 *e*2 and *f*2, arranged to provide independent and unobstructed passages for the oil and steam, in manner substantially as and for the purposes explained.

No. 37,037.—JOHN FIRTH and JOHN INGHAM, of Phillipsburg, N. J.—*Improved Flask for Cast-Iron Pipes.*—Patent dated December 2, 1862.—This flask is composed of two semi-cylindrical pieces or sections connected together by hinges. At the part opposite the hinges or junction of the two parts are flanges, which are secured firmly together by means of clamps and wedges. To the outer sides of the flask are attached staples by which they are suspended upon the chain for elevating the same. In the side of the flask are holes provided with covers, into which holes are inserted smaller moulds for the purpose of forming bosses upon the pipe when necessary.

Claim.—First, the combination, substantially as set forth, of the two halves A and A′ of the flask hinged together, the staples I, or their equivalents, the flanges *a a*, and clamps B B, or their equivalents, for the purpose specified.

Second, the covers H of the holes G, when the said covers are hung to the side of the flask and adapted to projections on the same, in the manner described.

No. 37,038.—F. W. HUDSON, of Leominster, Mass.—*Improvement in Apple Parers.*—Patent dated December 2, 1862.—This invention consists in arranging the fork on which the apple is placed with a gearing in such a manner that it will, by turning a crank, rotate upon its axis, and also rotate in a circle in such relation with a knife or cutter that the apple will be properly pared; the knife being so arranged as to operate conjointly with the fork to effect that result.

Claim.—The arrangement of the gearing E *g h*, disk E, and shaft C, substantially as shown, for giving the fork I, and apple thereon, the two movements specified; in combination with the knife-arm J, arranged to operate conjointly with the aforesaid parts through the medium of the pinion G, lever M, and flange *l*, on disk F, or their equivalents, substantially as herein described.

No. 37,039.—D. M. GUNN and C. L. CAIN, of Oskaloosa, Iowa.—*Improvement in Beehives.*—Patent dated December 2, 1862.—The comb frames, which are suspended within the body of the hive, have each attached to them a curved spring or elastic projection, which serve to keep the frames in proper position and at a suitable distance apart. The hive is provided with a sliding bottom having around its edge a vertical cleat, at the centre of which is a recess to admit of the passage of the bees. On the under side of the sliding bottom are also recesses extending around three sides near the edges, the spaces between the recesses and edges of the bottom being notched, as also the edges of the side of the body of the hive, for the purpose of admitting the external air, and also serving as moth traps.

Claim.—First, the springs or elastic projections C attached to the comb frames B, as and for the purpose herein shown and described.

Second, the false or sliding bottom F, provided with a cleat *j* all around its edge, and an alighting board *n*, and also provided with recesses *l* in its under surface, in connexion with the notches *m*, in the under side of the bottom, and in the lower edges of the sides of the bottom of the hive, substantially as and for the purpose herein set forth.

No. 37,040.—Cancelled.

No. 37 041.—JOSEPH GOODRICH, of Muscoda, Wis.—*Improvement in Sorghum Strippers.*—Patent dated December 2, 1862.—This invention consists in the employment of a cutter or knife formed of an elastic steel plate of a triangular shape, and curved or bent in such a manner as to readily adjust itself to the cane in passing through it, and thus detach the leaves and the light sheath around the joints.

Claim.—The cutter A, when constructed, arranged and operating substantially as and for the purposes delineated and set forth.

No. 37,042.—RICHARDS KINGSLAND, of New York, N. Y.—*Improvement in Heaters and Ventilators for Tents.*—Patent dated December 2, 1862.—This apparatus is designed more especially for heating hospital and other tents of large size, and consists in the employment of two stoves with smoke flues communicating with each end of a long drum placed above them, from the centre of which the discharge flue rises and a ventilating tube descends.

Claim.—The combination of the stoves A B, drum F, ventilating pipe H, and discharge-pipe G, constructed and arranged to operate in manner substantially as and for the purpose set forth.

No. 37,043.—RICHARDS KINGSLAND, of New York, N. Y.—*Improvement in Army Stoves.*—Patent dated December 2, 1862.—This invention consists in the arrangement of a "course" of stoves with their legs and pipes in such a manner that two or more stoves, with all their attachments, can be placed one inside of the other, so as to admit of being packed in a comparatively small space for transportation. The body of the stove is constructed in an elliptical form, having a section cut away so as to form a flat surface upon the upper part. The stove is supported by legs fitting into loops upon the sides. The pipe is made in sections, of a tapering form, and, with the head, is retained by means of a prong projecting from the lower end of the pipe catching into a loop on the inner surface of the head.

Claim.—First, a course of two or more stoves A B, each having the form of an elliptical cylinder with a flat upper surface, and provided with movable legs *b*, a movable head *d g*, and tapering pipe *i*, all as herein described, so as to adapt them to fit compactly one within another, in the manner and for the purposes explained.

Second, securing the pipe *i* and movable head in position by means of the prong *h* and loop *j*, in manner substantially as and for the purposes explained.

No. 37,044.—HENRY KURTH, of New Lotts, N. Y.—*Improvement in Tobacco Pipes.*—Patent dated December 2, 1862.—In this pipe the bowl and stem are made of one piece of wood. Above the junction of the stem with the bowl is inserted a perforated plate, in which is retained a weighted valve so arranged that the inner end of the smoke channel is never closed by the tobacco in the bowl, thus insuring a good draught and admitting of a ready removal of the condensed moisture or other impurities which accumulate in the lower part of the bowl.

Claim.—The arrangement of the central opening *c* and weighted valve *d*, in combination with the perforated plate C inserted into the bowl A of a smoking pipe, substantially in the manner and for the purpose shown and described.

No. 37,045.—J. H. MABBETT, of Mechanicsville, N. Y.—*Improvement in Railroad Chairs.*—Patent dated December 2, 1862.—This chair is constructed of wrought or cast iron, with a recess or opening through its centre, in which is inserted a piece of wood, rubber, or other elastic material, and over which are placed the ends of adjoining rails for the purpose of relieving the latter from the jar caused by a passing train of cars. Upon each side of the recess are curved lips, one of which extends upwards on the outside of the rail, and in contact with the shoulder formed by the tread of the same, so as to aid in supporting and keeping it in position. The other or inner lip serves to retain the lower flange of the rail in position.

Claim.—First, a railroad chair having a recess or opening E through the bottom plate or bed thereof, with lip D upon the inside, and the lip B on the opposite side thereof, and each next adjoining the said recess or opening E on opposite sides of the same, in combination with the block P, substantially as herein described and set forth.

Second, supporting the head or table of railroad rails at their respective joints on the outside thereof, and immediately under and adjoining the same, by means of the brace B, in combination with the bottom plate or bed of the chair, and with the head or table of such rails, whereby great strength is given thereto, and undue wear and fracture thereof prevented, substantially as herein described and set forth.

No. 37,046.—ALEXANDER MACKEY and J. W. JARBOË, of New-York, N. Y.—*Improvement in Drip Pots for Refining Sugar.*—Patent dated December 2, 1862.—This invention consists in casting the bottoms of the drip pots with projecting ribs, for the purpose of strengthening them, so that in setting the pots one upon the other, the ribs of the upper one will rest upon the neck of the one underneath it, and thus prevent them from being fractured in handling.

Claim.—The construction of a drip pot with a ribbed bottom, substantially as and for the purpose herein specified.

No. 37,047.—J. J. MARCY, of Meriden, Conn.—*Improvement in Lamp Burners.*—Patent dated December 2, 1862.—This invention consists in the employment of a burner provided with a draught-tube or deflector, and a chimney flanch or supporter, so arranged as to obtain an internal draught within the burner and an external draught around the deflector or cone.

Claim.—The burner B, having its tube *c* perforated at its lower end and encompassed by the guard or flanch *f*, in combination with the perforated annular flanch or chimney supporter C, applied to the tube *c*, below the deflector or cone *d*, all arranged as and for the purpose herein set forth.

No. 37,048.—I. M. MILBANK, of Greenfield Hill, Conn.—*Improvement in Breech-loading Fire-arms.*—Patent dated December 2, 1862.—This invention relates to the employment of a chambered breech which is fitted to the rear of the barrel with a valve-like joint, and has a movement towards and from the barrel in a direction parallel therewith, and also a tilting movement to bring its muzzle above the barrel.

Between the rear of the chamber breech and the rear end of the cavity in the frame for the reception of the said breech is a curved wedge, which is attached to the front end of a lever working upon a fulcrum pin in a mortise in the upper part of the frame in the rear of the cavity, and which serves to raise its rear end and depress the front end, to which the wedge is attached.

Claim.—The employment of a detached or loose breech, piece C and a self-locking independent breech wedge D, arranged to operate together in the manner herein shown and described.

No. 37,049.—LEWIS and JACOB MILLER, of Canton, Ohio.—*Improvement in Harvesting Machines.*—Patent dated December 2, 1862.—This invention consists in the use of double pawls in connexion with each ratchet wheel, so that one shall hold and the other slip whichever end of the main frame goes foremost, or when the machine is converted from a reaper to a mower. The raker's stand or seat is placed upon the coupling bar of a hinged platform machine, so that his (the raker's) position, with regard to the platform, shall not be changed as he rises and falls with it.

In connexion with a hinged finger bar or hinged platform is used a hinged fence on said platform, so that the finger bar, with the platform attached to it, may be folded up against the main frame to be carried by said main frame.

Claim.—First, in combination with a reversible main frame and cutting apparatus, the double pawls and ratchets for connecting and disconnecting the driving wheels and axle, so that the necessary fast and loose motions of the wheels upon their axles may be had, whichever end of the main frame goes foremost, substantially as described.

Also, in combination with a hinge platform or cutting apparatus, the locating of the raker's position on the coupling bar, which connects said platform or cutting apparatus with the main frame, substantially as described.

Also, in combination with a hinged platform, finger bar, and cutting apparatus, a double-hinged side or fence on said platform, so that the finger bar, cutters, and platform attached to them, may be folded up to or against the main frame, so as to be carried by the main frame, substantially as described.

No. 37,050.—W. T. NICHOLS, of Rutland, Vt.—*Improvement in Motive Power.*—Patent dated December 2, 1862.—This device consists of a platform or rocker, having secured to its under side at each end brackets, which are hinged at their lower ends to a foundation piece. To each end of the upper portion of the rocker are attached standards, having their upper ends attached to pitmen connected with a wheel that carries a band. Motion is imparted to the rocker by a person standing upon the same, and alternately varying the line of gravity from heel to toe.

Claim.—A treadle or rocker E, constructed, arranged and operated substantially in the manner and for the purpose set forth.

No. 37,051.—J. D. OTSTOT, of Springfield, Ohio.—*Improvement in Lifting Jacks.*—Patent dated December 2, 1862.—This device consists of a hollow metallic stock through which the lifting bar passes, and provided at one side with a hole into which the lever is inserted. In a slot at the end of the lever are pivoted two pawls, which catch in racks on each side of the lifting bar. The upper ends of the pawls are connected by means of two coiled wire springs in connexion with a rod which passes through the pawls. By pressing the finger bar upon one of the pawls, and at the same time pushing the rod in an opposite direction, the pawls are separated, so that the lifting bar will be suddenly dropped after being raised, and by removing only one pawl at a time the lifting bar may be gradually lowered with any imposed weight.

Claim.—First, so connecting and combining the lever B with the stock and lifting bar that it may be attached or detached, for use or for transportation at a moment's notice, in the manner herein set forth.

Second, the employment of the rod *d* in connexion with the pawls *a a*, for the purpose of detaching them from the teeth of the rack bar when necessary, substantially as specified.

Third, the arrangement of the lever B, the pawls *a a*, the springs *c c*, the rod *d*, and the lifting bar E, in the manner and for the purpose specified.

No. 37,052.—C. H. PALMER, of Lakeville, Conn.—*Improvement in Repeating Guns.*—Patent dated December 2, 1862.—Reference to the specification and drawings will be necessary for an understanding of the invention.

Claim.—First, presenting and thrusting the cartridges into the rear of the revolving barrel or series of such barrels in one point in its circuit, confining and discharging them at another point in such circuit, and removing the shells or cases in another part of such circuit, in the manner substantially as set forth.

Second, the employment in such machines of the projections *g* and surface i, arranged relatively to the breeches of the barrels G and to the surface I, or their respective equivalents, in the manner set forth, and this is claimed whether the breeches of the barrels and the projections *g*, or either of them, be adjustable or permanently fixed.

Third, the employment in breech-loading arms of the movable spout N, turning on a hollow axis in line with the barrel to be charged, for the purpose herein set forth.

Fourth, the arrangement of the movable spout N, springs P and N2, and pusher Q3, as herein set forth.

Fifth, the spring guides N1, arranged in an annular series around the path of the pusher Q3, for the purpose set forth.

Sixth, the clearing hooks *t t*, arranged and operated as described, in connexion with the revolving barrels G, or their equivalents.

Seventh, the clearing lever U, operated by the reciprocation of the clearing hooks *t t*, and combined and arranged therewith, substantially as herein set forth.

No. 37,053.—J. G. PERRY, of South Kingston, R. I.—*Improved Meat Cutter.*—Patent dated December 2, 1862.—This apparatus consists of a case shaped like two hollow cylinders placed side by side, and divided horizontally through their centres into an upper and lower part hinged together at one side. In each side of this case are placed two cylinders having longitudinal spiral flanges which form cutters, the flanges of one passing between those of the other. One cylinder is provided with a less number of flanges than the other, but having a greater inclination, which causes it to revolve faster than the other, and make a shearing or drawing cut.

Through the flanges of the cylinder having the smaller number are cut a series of grooves to admit of the entrance of knives that project up from the bottom of the case, so as to cut the meat across between the flanges.

Claim.—First, the combination of the two spiral-flanged cylinders, differing from each other in the number of flanges and in the speed at which they are driven, substantially as therein described and for the purposes set forth.

Second, the cross knives S, in combination with the case and cylinders, substantially as described and for the purpose set forth.

No. 37,054.—TITUS POWERS, of Philadelphia, Pa.—*Improvement in Rifling Machines.*—Patent dated December 2, 1862.—Within a tube, having on its inner side as many spiral grooves as it is desired to cut in the barrel to be rifled, is arranged a piston or plunger fitting so as to turn and slide to and fro freely, the rear end of the said plunger being connected to a projection on a reciprocating frame. To the extreme rear end of the plunger is secured a hub, from which radiate as many arms as there are spiral grooves in the interior of the tube. Upon a projection of the frame is hung a bell-crank lever, the straight arm of which is caused to act on one or other of the arms on the hub during the movement of the machine, while the bent arm is acted on by a pin on a projection of the reciprocating frame. In the reciprocating frame is an elongated opening with semicircular ends, having teeth upon its interior edges, forming a rack, into which gear the teeth of a pinion secured to a shaft, the front end of which is arranged to turn and traverse in a groove formed on the inside of a plate which is secured to the front of the reciprocating frame.

Claim.—First, the combination of the vibrating pinion shaft I and pinion H with the reciprocating frame E and plunger D, all constructed and arranged substantially as set forth.

Second, causing the reciprocating frame, or any devices connected therewith, to impart an intermittent motion to the plunger D or tube C, through the intervention of a bell-crank lever G and hub F, with arms *y*, substantially as specified.

No. 37,055.—T. H. RISDON, of Mount Holly, N. J.—*Improvement in Casting Water-Wheels.*—Patent dated December 2, 1862.—This invention consists in casting all the parts comprising the wheel in one piece, by forming, by means of a suitable mould, cores for the buckets, or for the spaces between the buckets, and setting them up in a mould prepared in sand.

Claim.—Casting water-wheels in one piece, in the manner and by means of a mould or moulds, constructed and arranged as described.

No. 37,056.—GIDEON ROBINSON, of New York, N. Y.—*Improvement in Shoulder-Straps.*—Patent dated December 2, 1862.—This invention consists in forming the border of the shoulder-strap of wire, by coiling the latter upon a mandril of half-round or nearly half-round shape, to form the sides and ends of the border, and combining the sides and ends by means of internal corner pieces, stamped or otherwise formed of plate metal.

Claim.—A shoulder-strap having its border composed principally of a series of wires *b b* coiled or wound in a half-round form, and a series of internal corner pieces C C, combined substantially as herein specified.

No. 37,057.—CHRISTIAN SHARPS, of Philadelphia, Pa.—*Improvement in Rifling Machines.*—Patent dated December 2, 1862.—Passing through a hollow cylinder, supported on a suitable frame, is a rod E enlarged at its front end, the enlarged portion fitting snugly to the

bore of the cylinder, and being furnished with six inclined projections which engage into the spiral grooves cut in the said cylinder. The rod E is furnished near its rear end with a hub F, on which are cut a number of reversed inclined grooves; a projection *i* on the end of a spring I, which is secured to the rear standard, being arranged so as to engage in one or the other of these grooves, and thus cause the cutter to move from one groove to the other as the rifling rod is reciprocated. A reciprocating motion is imparted to the cutting rod by means of an endless belt or chain, to which is secured a box having fitted in it snugly, but so as to turn freely, a pin secured to a bent connecting rod. The end of this connecting rod is joined to the sliding rod H, by which means a uniform speed is imparted to the rifling rod.

Claim.—First, imparting to the cutting rod of a rifling machine a reciprocating motion through the medium of an endless belt or chain, or their equivalents, and a rod connected thereto, substantially as and for the purpose herein set forth.

Second, any convenient number of projections *x* on rod E, in combination with the grooved cylinder D, when each projection is caused to pass from one groove of the cylinder to an adjacent groove by the automatic devices herein described.

Third, in combination with the rod E of a rifling machine the hub F, with its reversed inclined planes *m* and *n*, the spring I and its projections *i*, the whole being arranged and operating substantially as and for the purpose herein set forth.

No. 37,058.—ARIEL SAMPSON, of Providence, R. I.—*Improvement in Putting Up Cranberries for Preservation.*—Patent dated December 2, 1862.—This invention consists in putting up cranberries in hermetically sealed packages of convenient size and form for family use or exportation, the fruit being preserved in its natural condition in such packages by being submerged in water.

Claim.—The merchantable packages of cranberries, preserved in their natural condition by being submerged in water, as a new manufacture or article of trade.

No. 37,059.—JAKOB RUPERTUS, of Philadelphia, Pa.—*Improvement in Revolving Fire-arms.*—Patent dated December 2, 1862.—Secured to or forming part of the barrel is a breech or centre-pin, upon which the chambered cylinder fits, so as to serve as a longitudinal stay for the frame, and render it easy of removal from or connexion with the arm. Hinged to the frame is a curved arm, the rear part of which is made to conform to the shape of the hammer, and fitting over the rear end of the breech-pin to hold the latter securely in position.

Claim.—First, the centre-pin C, having one end secured to the barrel and the other end formed substantially as described, so as to fit to the frame, the pin thereby serving as a longitudinal stay to stiffen the said frame, as described.

Second, the arm I, hung to the frame, and adapted to the end of the centre-pin, substantially as described.

No. 37,060.—J. M. SIMPSON, of Maultville, N. Y.—*Improved Machine for Cutting Tenons on Wheel Spokes.*—Patent dated December 2, 1862.—This invention consists in the employment of a reciprocating frame, provided with adjustable cutter-bars so arranged that they can be set to the required thickness of the tenon to be cut, and used in connexion with an adjustable bed provided with a gauge, clamp, and guide, by means of which any desired degree of bevel may be given to the shoulders of the spoke. The inner end of the spoke is placed between the cutter-bars, so that as the latter are forced apart the operator, by means of a lever, moves the frame up and down, the cutters at each descent taking a shaving off from opposite sides of the spoke until the tenon is formed.

Claim.—First, the cutter-bars E E, placed in the reciprocating frame B, and used in connexion with the adjustable keys or wedges *j j s s*, all arranged substantially as and for the purpose set forth.

Second, the adjustable bed H, provided with the gauge M, guide J, and clamp K, when said bed is used in connexion with the cutter-bars E E and the reciprocating frame B, and arranged therewith as and for the purpose specified.

Third, the combination of the cutter-bars E E, reciprocating frame B, and adjustable bed H, all arranged for joint operation as and for the purpose set forth.

No. 37,061.—C. E. STELLER, of Genesee, Wis.—*Improvement in Harrows.*—Patent dated December 2, 1862.—This invention consists in the arrangement of two or more rows of flanged teeth rounded at their front edges, and secured to the under side of the frame in oblique positions, one row being inclined to the right and the other to the left, and so disposed as to cover the whole line. At the rear of the frame are secured two or more triangular ribs or bars, which serve to smooth and level the earth as it is pulverized.

Claim.—The arrangement of two or more rows of teeth C D, secured by means of flanges *c d* and screws *a*, or their equivalents, in oblique positions to the frame A, in combination with the triangular bars or ribs E on the rear part of the frame A, all constructed and operating in the manner and for the purpose specified.

No. 37,062.—W. H. THOMPSON, of Cleveland, Ohio.—*Improvement in Horseshoe Machines.*—Patent dated December 2, 1862.—To the centre of a shaft, situated at the upper part of the machine, is secured a disk or cylinder D, having upon its opposite sides dies F F′, which are raised above the surface of the wheel and so curved upon their outer faces as to conform to corresponding flat revolving dies on a wheel below. Upon the face of these dies are lips or projections which form the crease in the shoe. To the centre of a shaft, placed in the lower part of the machine, is secured a disk or cylinder E of equal diameter with the above-mentioned disk, the said disk E being provided with two mandrels J J′, the stems of which are enclosed each in an opening or cavity in the disk and project through opposite sides of the circumference. Upon each of these stems are cross-arms, by means of which the mandrels are moved out and in. Stationary cams O O′ are so arranged as to cause the said cross-arms to move the mandrel out, where it is held until it has passed from its horizontal to a point beyond the vertical position, or so as to have passed the dies respectively. Two pairs of sliding jaws are made to slide to and from the mandrels upon the surface of the lower disk by means of stationary cams attached to standards of the frame. Immediately in front of the lower wheel is a standard to which is attached the devices for gauging, holding, and cutting off the heated bar for the shoe.

Claim.—First, the adjustable rest Q′, gauge S, slide U, and fingers *b b*, in combination with the cylinder E and sliding mandrels J J′.

Second, the combination of the cylinder E, the mandrels J J′, with their radial stems M M′ and arms N N′, with the cams O O′, constructed and arranged substantially as set forth.

Third, the combination of the cylinder E, the sliding jaws G G G′ G′, cams I I, and pin K, operating in conjunction with the wheel D and male dies F F′, the whole constructed and arranged substantially as specified.

No. 37,063.—JOHN TREMPER, of Buffalo, N. Y.—*Improvement in Variable Cut-off Gear for Steam Engines.*—Patent dated December 2, 1862.—This invention consists in a mechanism composed of two toothed lifters or tripping levers joined to two arms of a rock shaft, and operating in combination with a toothed block on the upright stem or rod of the cut-off valve, and with a cone or wedge connected with a governor, or otherwise made adjustable, whereby a gradual opening of the cut-off is obtained for the admission of steam to the engine cylinder, and a sudden closing of the same to cut off the steam at such point as may be required during the first half of the stroke of the piston. In combination with the said tripping levers is the application of a certain device for enabling the steam to be continued on the piston to different points beyond the half stroke.

Claim.—First, the attachment of the lifters or tripping levers F F′ by pivot joints to two arms E E′, which are so arranged upon a rock shaft, or its equivalent, as to work below the axis thereof, and so cause the opening of the valve, slowly at first and with a gradually increasing velocity, substantially as and for the purpose herein specified.

Second, the combination of the lifters or tripping levers F F′ applied as above specified, the lifting block B, and the cone G, substantially as and for the purpose herein set forth.

Third, the arrangement of the lifters or tripping levers F F′ and the toothed lifting block B, in combination with the rock shaft D and a cone G, connected with the governor, or otherwise controlled, substantially as herein specified.

Fourth, the mechanism shown in Figs. 3, 4, and 5, and herein described, for tripping the levers F F′ in their downward motion, substantially as and for the purpose herein set forth.

No. 37,064.—JOHN TREMPER, of Buffalo, N. Y.—*Improvement in Centrifugal Governors.*—Patent dated December 2, 1862.—This invention consists in a method of applying the balls in combination with the spindle or axis of the governor, and with a weight or spring employed to act in opposition to the centrifugal force of the ball, so that the governor may be driven at any speed, and increase or obtain power according to the speed in such ratio as to overcome friction, and also to enable the balls to be made small and effect the necessary movement of the valve by a very little motion toward and from the axis of revolution, so that the governor may be caused to run at the same speed, whatever may be the position of the balls relatively to the axis. The balls are so connected with the rod, or its equivalent, through which their action is made effective on the regulating valve, that the latter may be used as a stop valve to stop the engine at any speed, and thus a separate stop may be dispensed with.

Claim.—First, a steam governor having vertical or nearly vertical ball arms *b b* and arms *c c*, horizontal or otherwise, acting upon a valve-controlling or valve-actuating rod *d*, the arms *c c* being as long as or longer than the arms *b b*, and the whole so constructed and arranged as to avail the full centrifugal force of the balls when hanging in vertical or nearly vertical positions, and impart to the rod *d* a motion at least equal in extent to that of the balls.

Second, the rectangular or nearly rectangular ball arms *b c*, *b c*, and the loaded lever G, applied in combination with each other and in relation to the governor spindle and valve-operating or valve-controlling rod *d*, substantially as herein specified.

Third, so constructing the connexions or surfaces of contact of the ball arms, the valve-operating or valve-controlling rod, and the loaded lever, that the effective load on the lever, acting in opposition to the centrifugal force of the balls, increases or diminishes as the centrifugal force of the balls increases or diminishes, substantially as herein described.

No. 37,065.—W. H. WILLARD, of Cleveland, Ohio.—*Improved Revolving Extension Coulter and Gauge Wheel Combined.*—Patent dated December 2, 1862.—The rim of the gauge wheel, which latter is attached to the plough beam in the ordinary manner, is made in two parts secured in place by means of nuts and screws. The extension coulter consists of four segmental steel plates, in which slots are made so as to allow them to slide upon the connecting bars and extend more or less beyond the face of the wheel, between the rims of which they are clamped.

Claim.—A gauge wheel and revolving extension coulter, constructed and operating substantially as and for the purpose specified.

No. 37,066.—W. A. WOOD, of Hoosick Falls, N. Y.—*Improvement in Cutting Apparatus for Harvesters.*—Patent dated December 2, 1862.—This invention consists in the employment of a bow-shaped finger guard, which is placed in contact with the end and under side of the finger bar only and secured thereto by a bolt. The guard surrounds the finger bar, extending on the same plane in rear of the finger bar, and leaving a wide, unobstructed space in its rear part, and terminates at or near the point of the cutter, the object being to enable the machine to work in short, thick, or tangled grass without clogging.

Claim.—The harp or bow-shaped guard surrounding the finger bar, and leaving the unobstructed space herein represented between itself and the finger bar, substantially as and for the purpose described.

No. 37,067.—WILLIAM R. ARTHUR, of Chicago, Ill., assignor to Himself and L. H. CLARKE, of the same place.—*Improvement in Railroad Splices.*—Patent dated December 2, 1862.—This invention is explained by the claim and engraving.

Claim.—A splice or fastening for T-rails, consisting of the pair of deeply crimped fish plates B *a b c* B′ *a b c*, secured by bolts or keys C C′ passing through the upper part of the fish plates and through the neck of each rail, and by one or more bolts or keys C″ C‴ passing through the lower parts of the fish plates beneath the rails, when the said plates are adapted to fit the T-rails in the manner specified, that is to say, wedging tightly between the base and tread of the rails, grasping the base above and below, and covering the under side of the latter for the greater part of its width, all as herein shown and described, so as to support the head and base of the rails against both vertical and lateral deflection without strain upon the bolts.

No. 37,068.—E. C. BLAKESLEE, of Waterbury, Conn., assignor to HOLMES, BOOTH & HAYDEN, of the same place.—*Improvement in Lamps.*—Patent dated December 2, 1862.—This invention consists in the employment of a bent lever, having its fulcrum on the cap that carries the glass chimney, and acted upon at its inner end by a spring, so that the chimney is retained within its ring or support by means of the said bent lever, or easily released from the same by pressing back the lever.

Claim.—The bent lever *g* on the fulcrum 1, and actuated by a spring, as set forth, in combination with the flanged chimney *c* and ring or holder *b*, for the purposes and as specified.

No. 37,069.—P. L. CLOW, of Cohoes, N. Y., assignor to Himself and WINDSOR STONE, of the same place.—*Improvement in Sash Fastenings.*—Patent dated December 2, 1862.—This invention consists of a latch which may be attached to the frame of a window, and is constructed with a chamber and groove for the reception of a spring to hold the same in position. On the under side of the catch is a dovetail-shaped lug, which fits in a corresponding recess in a catch piece secured to the window sash by which means the latter may be prevented from being raised or be held in an elevated position.

Claim.—The latch C, the catch *b*, and the spring *e e*, the whole constructed, arranged, and operating in the manner and for the purposes set forth.

No. 37,070.—JAMES CRAWFORD, of Roxbury, Mass., assignor to Himself and W. H. MCINTOSH, of the same place.—*Improved Flower Stand.*—Patent dated December 2, 1862.—This device consists of a standard secured upon a pedestal, upon which standard are attached, by means of sleeves or rings, a series of brackets provided at their outer ends with circular shelves for the reception of flower pots. The brackets are made to turn upon the standard independently of each other, so as to admit of being arranged in a variety of ways.

Claim.—The flower stand herein described and represented, consisting of shelves *c*, brackets B, standard A, and pedestal *a*, combined, arranged, and operating in the manner and for the purpose set forth.

No. 37,071.—GEORGE CUSTER, of Monroe, Mich., assignor to Himself, E. B. ROOT, and J. J. STEVENS, of the same place.—*Improved Cultivator Tooth.*—Patent dated December 2, 1862.—This invention consists in constructing a cultivator tooth of rolled steel with a wing at each side, both formed from the same piece.

Claim.—As an improved article of manufacture, a cultivator tooth provided with wings, and all constructed of a piece of rolled steel, in the manner herein set forth.

No. 37,072.—THOMAS HOPE, of Boston, Mass., assignor to Himself and HENRY EDGARTON, of Shirley, Mass.—*Improvement in Skates.*—Patent dated December 2, 1862.—This device consists of a heel plate or platform which is arranged to slide longitudinally by means of a right and left screw engaging at one end in a projection underneath its forward part, the other end of the screw passing through a post in front. The screw is turned by means of a handle or "lantern" at its centre. At the forward part of the skate is a stationary foot-rest, to which is attached a flexible loop. The heel is secured in place by means of a strap attached to buttons on a heel plate, while a bifurcated strap passes over the instep and is fastened by a buckle.

Claim.—The actuator, consisting of the right and left screw and lantern, when used in combination with the sliding heel-rest C, the stationary foot-rest *b*, loop B, and heel and instep straps D and E.

No. 37,073.—STEPHEN HULL, of Poughkeepsie, N. Y., assignor to Himself and ISAAC W. WHITE, of the same place.—*Improvement in Harvesters.*—Patent dated December 2, 1862.—This invention consists in constructing the tooth of the form shown in the engraving, for the purpose of preventing clogging below the knives as well as above them.

Claim.—Constructing the guard fingers A with four planes *d n i j*, or the equivalent thereof, substantially as and for the purposes set forth.

No. 37,074.—R. G. HUNT, of New York, N. Y.—*Improvement in Wooden Sieves for Gas Purifiers.*—Patent dated December 2, 1862.—This invention consists in making a sieve, or section of a sieve, from solid wood by cutting slots in the same of a bevelled form, the bars being wider at their lower than at their upper edges, for the purpose of stiffening and sustaining the bar and end piece.

Claim.—A sieve, or section of a sieve, made from the solid wood by slotting, when the slots are conical in form, and so formed at the end as to leave a wider bar at the end on the bottom side, substantially as described, and substantially for the purpose hereinbefore set forth.

No. 37,075.—JAMES JENKINSON, of Brooklyn, N. Y., assignor to JOSEPH MERWIN and E. P. BRAY, of New York, N. Y.—*Improvement in Revolving Fire-arms.*—Patent dated December 2, 1862.—This invention consists in the employment of a slide fitted in a groove across the front of the recoil shield, and provided with a slot for the passage of the cylinder axis pin, and with a notch in its lower edge for a pawl to work in, by which latter the rotary motion of the cylinder is effected, and so arranged that the slide prevents the acts of cocking the hammer or rotating the cylinder while it is open, and that the hammer, when cocked, prevents the said slide from being opened.

Claim.—The slide F, so constructed with a slot *e* and notch *f*, or their equivalents, and so combined with a pawl *a*, through which the rotation of the cylinder is effected, that the cocking of the hammer and rotation of the cylinder are prevented while the slide is open, and that the pawl prevents the slide from being opened while the hammer is being cocked, substantially as herein specified.

No. 37,076.—C. B. LONG, of Worcester, Mass., assignor to Himself, AUGUSTUS RICE, and JONATHAN LUTHER, of the same place.—*Improvement in Adjustable Sights for Ordnance.*—Patent dated December 2, 1862.—This invention relates, in part, to the device for indicating the elevation of ordnance which constitutes the subject-matter of a patent granted to the said Long, Rice & Luther on July 29, 1862, and it consists in combining a sighting bar with the said device for indicating the elevation of the piece on the same side of the gun as the latter device, so that the sighting of the gun and the adjustment of the elevation may be directed simultaneously by the same person.

Claim.—Combining the sighting bar and the device for indicating the elevation on the same side of the piece, substantially as and for the purpose herein specified.

No. 37,077.—G. H. REYNOLDS, of New York, N. Y., assignor to Himself and C. H. DELAMATER, of the same place.—*Improvement in Condensing Steam Engines.*—Patent dated December 2, 1862.—The rod which carries the air-pump bucket is connected by means of links to an arm upon a stout rocking shaft which is mounted in suitable bearings on the main frame, and receives motion by means of an arm and connexion from a small secondary crank pin or air-pump crank which is on the further or front side of the engine. Instead of being on the same side of the main shaft as the main crank pin, or on the opposite side thereof, it is nearly quartering thereto. The cock Q, which controls the communication between the interior of the air-pump above the bucket and the external atmosphere, is connected by means of a rod with the cock that controls the admission of cold water to the condenser, so that both may be simultaneously operated by the engineer, one being opened while the other is closed. The pressure of air upon the upper side of the air-pump bucket forces the latter down to the lowest point in its stroke if it is not already there, and in doing so turns the main shaft so as to carry the main crank pin to nearly halfway between its highest and lowest position.

Claim.—First, the so combining and arranging the air-pump bucket relatively to the steam piston that the latter shall, by the pressure upon the former, be caused to come to or near the condition of half-stroke, substantially in the manner and for the purpose herein set forth.

Second, operating the pressure cock Q, or its equivalent, by the movements of the injection cock, substantially in the manner and for the purpose herein set forth.

Third, the so arranging the parts of the pressure cock or valve and of the injection cock or valve, and their several connexions, that the injection orifice may be increased and diminished without affecting the pressure orifice, and yet so that, by an additional movement of the same controlling means, after the injection orifice is closed, the pressure orifice may be opened with the effect herein set forth.

No. 37,078.—PAUL SCHULZE, of Brooklyn, N. Y., assignor to Himself and F. W. BILLING, of the same place.—*Process of Obtaining Printing Surfaces.*—Patent dated December 2, 1862.—The object of this invention is to obtain a cheap substitute for electrotypes of wood engravings and for etchings on steel or copper. It is designed also to be used to obtain photographic negatives without a camera, and to make dies and seals. The process does not admit of a brief description.

Claim.—The within-described process of drawing in soluble ink and treating such drawing for the several purposes herein specified.

No. 37,079.—RICHARD WREN, THOMAS DUNSTONE, and JOSEPH BLIGHT, of Eagle Harbor, Mich.—*Improvement in Machinery for Manufacturing Safety Fuzes.*—Patent dated December 2, 1862.—This invention consists in so arranging and giving motion to the tubes and flyers or guides and spools or bobbins of a fuze-making machine as to lay the yarns and tapes in opposite directions alternately and simultaneously, by which means the process of making tape-covered fuze is enabled to be carried on simultaneously.

Claim.—The arrangement of and mode of driving the several tubes and their flyer arms or guides and bobbins or spools, whereby both the yarns and tapes are laid, wound, or twisted in opposite directions alternately and simultaneously, and the process of making the tape-covered fuze is enabled to be performed by a continuous operation, substantially as and for the purpose herein specified.

No. 37,080.—J. M. HANCOCK, of Philadelphia, Pa.—*Improvement in Coal Oil Lamps.*—Patent dated December 2, 1862.—This lamp is composed of a tapering tube, which rests upon and is hinged to a dish-shaped base, and surrounding at its lower part a small reservoir of oil provided with a tube and wick and used as a supplementary lamp. The main reservoir, which is placed at the upper end of the tapering tube, and surrounds the same, is provided with two flat tubes inclining towards each other, their upper ends nearly meeting. Between these wick tubes is a hollow tapering cap covering the top of the main tapering tube, and open at its upper end, so as to admit of the passage of air between the two wick tubes.

Claim.—First, any suitable reservoir D in which is a tube forming an air passage, the latter being surmounted by a cap H, and said reservoir having one or two wick tubes C and C′, when the latter are formed and arranged in respect to the opening in the top of the cap substantially as specified, and when a supply of air is transmitted to the cap, through the aforesaid tube, by the agency of a supplementary lamp.

Second, the tube E, and its reservoir D, when the former is hinged to a suitable base A, and is arranged to enclose a supplementary lamp B.

Third, the arrangement of the tube E, tube F, in reservoir D, and cap H.

No. 37,081.—J. A. DE BRAME, of New York, N. Y.—*Improvement in Machinery for Separating Fibres from Plants.*—Patent dated December 2, 1862.—This invention relates to the employment, in combination with each other, and with suitable feeding rollers, of a series of combs or combs and scrapers attached to the periphery of a cylinder, and a similar series attached to an endless belt, for the purpose of removing the woody or pulpy portions of the leaves from the fibre; and it consists in so arranging the bearings of the shaft of the said cylinder, and also the bearings of the shafts of the drums which carry the endless band, as well as those of the feed rollers, as to leave the machine open on one side to facilitate the removal of the fibres. The upper feed roller is so arranged as to allow the end next the open side of the machine to be raised for the purpose of permitting the uncombed ends of the leaves to be taken out of the machine.

Claim.—First, so arranging the bearings of the cylinder, those of the drums which carry the endless belt, and those of the feed rollers, as to leave the machine open on one side, substantially as and for the purpose herein set forth

Second, so applying the upper feed roller as to enable its outer end to be raised to increase the opening between the two feed rollers at the open side of the machine without raising the bearing of said roller at the opposite side, substantially as and for the purpose herein specified.

No. 37,082.—J. B. BARCALO, of Mt. Morris, N. Y.—*Improvement in Grain Separators.*—Patent dated December 9, 1862.—This invention consists in the arrangement in an ordinary grain shoe of an oat board placed at the lower part of the shoe and capable of longitudinal adjustment, together with a sieve or screen placed above the oat board and having a variable inclination so as to adapt its position to the strength of the blast and condition of the grain.

Claim.—The arrangement, in grain separators, of the oat board B, having a longitudinal adjustment, in combination with the sieve C, having an adjustable inclination, as described, and both operating conjointly with the blast, in the manner and for the purpose specified.

No. 37,083.—JACOB BICKHART, of Harlan, Ind.—*Improved Gate.*—Patent dated December 9, 1862.—This invention consists in the employment of a system of levers, in connexion with arms and a sliding bar, so constructed and arranged as to enable the gate to be opened by a person from a carriage or on horseback without alighting. The gate is retained in a closed state by means of the sliding bar.

Claim.—First, the levers F F, connected to the gate A through the medium of the arms E E, the latter being connected to the gate and to the levers by means of hinges, and all arranged as shown for the purpose of opening and closing the gate, as set forth.

Second, the sliding bar G, provided with a recess *k* at its under side, in combination with the slot *l* in the top bar *d* of the gate for the purpose of serving as a fastening for the latter, as set forth.

Third, the combination of the sliding bar G, levers F F, arms E E, and gate A, all arranged as and for the purpose specified.

No. 37,084.—HENRY A. BURR and LUCIUS E. ROCKWELL, of New York, N. Y.—*Improvement in Lubricators.*—Patent dated December 9, 1862.—This invention consists in attaching to or forming on the shaft next to each journal a circular cup or hollow wheel entirely closed on the inner side and open towards the journal and extending over the journal box, the opening being of smaller diameter than the inside of the cup, so that all the oil that leaves the journal and journal box shall enter and be caught by the said cup, and there retained until it shall have been collected in sufficient quantities to be thrown out, the object being to prevent the oil from getting upon the shaft and being thrown therefrom and wasted.

Claim.—The rotating cup or hollow wheel, substantially such as herein described, in combination with a shaft and journal box, and placed with its open end next to and extending over the end of the journal box, substantially as and for the purpose specified.

Also, in combination with the rotating cup or hollow wheel on the shaft, and extending over the end of the journal box, the projecting flanch on the end of the journal box, substantially as and for the purpose specified.

No. 37,085.—GEORGE T. COMINS, of Lowell, Mass.—*Improved Bed Bottom.*—Patent dated December 9, 1862.—The bed bottom is formed of a series of longitudinal wooden slats provided with slots at their ends and fitted on pins in the cross-rails of the bedstead so as to admit of their being inverted when they become sprung or "set" at on one side.

Claim.—The longitudinal elastic wooden slats B, provided at their ends with oblong slots *a* fitted on pins *b* in the cross-rails *c c* of the bedstead, substantially as and for the purpose herein set forth.

No. 37,086.—ROBERT CORNELIUS, of Philadelphia, Pa.—*Improvement in Kerosene Lamps.*—Patent dated December 9, 1862.—This invention consists in the employment of a circular spring attached to the inside of the lower part of the dome, and, passing around within the rim of the lower part of the dome, terminates in a hook which passes out and extends over the lower edge or rim of the glass shade, so that when the shade is placed on the dome the elasticity of the spring causes the hook to press upon and hold the shade, in connexion with a projection, down to the deflector. On each end of the frame aperture is placed a small projection extending upwards vertically for the purpose of preventing the flame from expanding.

Claim.—First, the hook *s t* for securing the shade to the deflector and the deflector to the lamp, substantially as above described, or for the purpose of a handle merely to the deflector.

Second, the auxiliary vertical end guide pieces *f f* for directing the air at the ends of the flame, and preventing it from expanding or burning irregularly.

No. 37,087.—EDWARD COTTY, of Washington, D. C.—*Improvement in Knee-joints for Artificial Legs.*—Patent dated December 9, 1862.—The object of this invention is so to form the joint as to imitate the eccentric motion of the natural knee-joint, avoiding all unnecessary friction, and making the shortening or reduction in the length of the leg proportional to the angle formed by the parts representing the femur and the tibia, respectively.

Claim.—The eccentric hinge formed of two parts, representing the lower parts of the femur and the tibia, in connexion with the adjustable spring *s*, or any other substantially the same, representing the fibres of the exterior tendons, as set forth and described.

No. 37,088.—SAMUEL R. DIMOCK, of Pittsfield, Mass.—*Improved Automatic Brake for Railroad Cars, &c.*—Patent dated December 9, 1862.—This invention consists in the arrangement of an oscillating frame carrying a spring and two pinions, one on a screw shaft and the other on an arbor, to which a longitudinal sliding motion is imparted by the action of the said screw shaft in combination with a suitable hand lever and with a cog-wheel secured to the axle of the wheels of a railroad car, so that by the action of the hand lever upon the frame the pinion which is attached to the screw shaft can be thrown in gear with the cog-

wheel on the axle and serves to wind up a spring as the car stops, the force of which can be used in turn to aid in propelling the car in starting.

Claim.—The arrangement of the oscillating frame E carrying the pinion H, with its screw shaft *e* and spring K, and the pinion I with the longitudinally sliding arbor *f*, in combination with the cog-wheel J on the axle C of the wheels of a railroad car, all constructed and operating substantially as and for the purpose herein shown and described.

Also, the arrangement of the dog *p* projecting from the pin *i* on the screw shaft *e*, in combination with the pinion H and spring K, as described, for the purpose of preventing the spring from unwinding any further than desirable.

No. 37,089.—L. H. DOYLE, of Waterloo, Iowa.—*Improved Cultivator.*—Patent dated December 9, 1862.—To the curved beam bar is attached at each side a laterally projecting bar, to which are bolted two angle bars, the latter being also attached to the plough standards in such a manner as to admit of their being secured at a greater or less distance apart, and also to admit of the shares being raised or lowered as desired.

Claim.—The combination with the beam bar A and standards E E of the adjusting bars *b d*, in the manner herein shown and described.

No. 37,090.—A. G. EDDY, of Ashfield, Mass.—*Improved Churn.*—Patent dated December 9, 1862.—To the upper and lower part of the shaft are attached radial arms, between which are fitted four beaters, two being stationary, and having a radial position with the shaft, while the other two are arranged in such a manner as to have a rotary motion on their axis independent of that caused by the rotation of the dasher shaft, but produced by the rotation of the latter.

Claim.—A rotary churn dasher, composed of two beaters G G, fixed in radial arms *d* attached to the dasher shaft B, and parallel therewith, in combination with the beaters K K, arranged to operate conjointly with the beaters G G, as and for the purpose herein set forth.

No. 37,091.—A. T. FREEMAN, of Binghamton, N. Y.—*Improvement in Revolving Fire-arms.*—Patent dated December 9, 1862.—The axis pin is composed of two separate pieces to enable it to be so inserted in the central bore of the cylinder that, while it fits loosely therein, it cannot drop out in either direction when it and the cylinder are removed from the frame. The rear piece is screwed into the front piece, the latter being made with a T head, at one end of which is a tongue which extends backwards a short distance parallel with the pin. The back piece is made with a shoulder, the portion on the front of the shoulder being cylindrical and of a diameter corresponding with the front piece, but the portion in rear of the shoulder being of a larger diameter.

Claim.—The cylinder axis pin, constructed of two pieces C C′, with a shoulder *c*, a T head *b*, and a tongue *b′*, and applied in combination with the cylinder and the frame of the fire-arm, substantially as herein specified.

No. 37,092.—WILLIAM FULTON, of Elizabeth, N. J.—*Improvement in Stoves.*—Patent dated December 9, 1862.—This invention consists of a portable stove designed to be used in the house or camp for heating rooms or cooking, which is effected by means of an open lamp or coal-oil grate, over which is placed a jacket provided with openings for the proper utensils; coal-oil, alcohol, naphtha, or other similar substance, being used for fuel for the same.

Claim.—First, the construction of the valves in extinguisher C, or their equivalent, as shown at S and V in Fig. 6, for producing a gas-light and regulating the action of the flame, either partially or wholly extinguishing it.

Second, the construction of cones D, or their equivalent, as shown in Fig. 3, for spreading the flame and admitting the air thereto, in combination with the extinguisher C shown in Fig. 6.

Third, the cone F, or its equivalent, as shown in Fig. 8, for producing a gas-light from the fuel when placed over cone D and fuel chambers *h*.

Fourth, the fuel chambers *h*, or their equivalent, as shown in Fig. 3, in combination with pipes *g*, in Fig. 4, for heating the water in reservoir A, the whole being arranged substantially as and for the purpose herein set forth.

No. 37,093.—SMITH GARDNER and A. B. HOWE, of New York, N. Y.—*Apparatus for Cleaning Rice, Coffee, and other Grains.*—Patent dated December 9, 1862.—This apparatus consists of a hollow cylinder, in which is placed a shaft provided with a series of short screws or propellers. Near the discharge end of these propellers the cylinder is contracted or reduced in diameter, terminating in an abrupt ledge. Upon the shaft are also a series of disks, the edges of which bear against the said ledges, and are kept in position by means of springs operating upon the hubs of the disks.

Claim.—One or a series of screws revolving in a cylinder and operating in conjunction with the disk or disks, substantially in the manner described and for the purposes set forth.

No. 37,094.—WILLIAM GARDNER, of New York, N. Y.—*Improvement in Metallic Bedsteads.*—Patent dated December 9, 1862.—This invention consists of a folding mosquito

frame combined with a metallic or other bedstead frame, of a height less than one-half the length of the said frame, and fitted so that the bedstead when folded will not be increased in thickness by the mosquito frames lapping over each other. These frames are provided with cross-bars forming head and foot guards, so arranged that they can be inclined more or less for the convenience of the occupant in certain positions.

Claim.—The folding mosquito frames *d d*, in combination with the bedstead frame *a*, in the manner shown, so that said frames *d d* fold clear of each other, as set forth.

Also, the variable braces, fitted as specified, in combination with the folding head or foot guards and bottom or frame *a*, as set forth, whereby the inclination of said head or foot guards can be varied, as specified.

No. 37,095.—VALENTINE HAEFFNER, of Dobbs' Ferry, N. Y.—*Improved Artificial Cellar.*—Patent dated December 9, 1862.—This invention consists in the arrangement of two ice boxes, one in the top and the other in the interior of the cellar or space to be cooled, in combination with tubes leading from the upper part of the cellar into the ice box at the top of the cellar, and with another tube leading from the upper down to the lower ice box, so that the warm air emanating from the liquors that may be stored in the cellar will rise and pass into the upper ice box, where it will be cooled and then sink down through the connecting tube into the lower ice box and be distributed throughout the cellar or space to be cooled, thus creating a continuous current of air.

Claim.—The arrangement of two ice boxes C F, one on the top and one in the interior of a cellar or enclosed space A, in combination with the tubes D and E, all constructed and operating substantially as and for the purpose shown and described.

No. 37,096.—E. P. HASKELL, of Harlan, Ind.—*Improved Machine for Bending Plough Handles, Hames, Carriages, Thills, &c.*—Patent dated December 9, 1862.—Between suitable guides on a bed or frame is fitted a longitudinal slide capable of adjustment by means of a screw and nut. Upon this slide, near its inner end, is placed a roller D, fitted loosely on a vertical shaft, the lower end of which is permanently secured in the slide, and the upper end having its bearing in a plate attached to the slide and projecting beyond the edge of the roller. Secured upon the bed by a vertical rod on which it turns is a pattern G of semicircular form, and to the upper surface of the bed is attached a bearing or guide, which is formed of bent metal plate and projects forward in front of the roller D at one side of it, its front end being in line with the rod of the pattern.

Claim.—The combination of the sliding pressure roller D, slide B, screw C, plate F, and guide J, with the rotary pattern G, in the manner herein shown and described.

No. 37,097.—ZENUS G. HURD, of Eldorado, Iowa.—*Improved Millstone Dresser.*—Patent dated December 9, 1862.—This invention consists in the arrangement of a hinged holder in combination with a trip lever in such a manner that the position of the pick in relation to the surface of the burr or stone can be adjusted at pleasure. In the interior of the eye is a V-shaped seat to receive the pick, with which is combined a wedge in such a manner that the eye can be readily fitted to picks of different shapes and sizes. Combined with the trip lever is a spring lever, in such a manner that, by the action of the latter, the force of the blow can be regulated at pleasure.

Claim.—First, the arrangement of the hinged holder H, in combination with the trip lever A and pick B, constructed and operating substantially as and for the purpose specified.

Second, the arrangement of the V-shaped seat *p* and triangular wedge *p*, in combination with the holder H and pick B, as set forth.

Third, the arrangement of the spring lever I, in combination with the trip lever A, as and for the purpose described.

No. 37,098.—EDWARD M. JUDD, of New Britain, Conn.—*Improvement in Brakes for Railroad Cars.*—Patent dated December 9, 1862.—This device consists of a barrel actuated by means of a lever and pawls, the chain which is attached to the brakes passing over the barrel, the object being to gain more power than can be exerted by the ordinary horizontal wheel.

Claim.—The barrel *f* and ratchet wheel *g*, in combination with the lever *h* and pawls *i k*, substantially as and for the purposes specified.

No. 37,099.—EDWARD M. JUDD, of New Britain, Conn.—*Improvement in Trucks for Railroad Cars.*—Patent dated December 9, 1862.—This invention consists in the employment of parallel shafts or axles extending across or nearly across the truck frame, the wheels being attached to the opposite ends of alternate shafts, so that each shaft has but one wheel, and is free to rotate independently of the others.

Claim.—Arranging a series of axles, in a truck for cars, parallel to each other and fitted with the wheels at opposite ends of the alternate shafts, substantially as and for the purposes specified.

No. 37,100.—THOMAS LANE, of San Francisco, Cal.—*Improvement in Machine for Digging Potatoes.*—Patent dated December 9, 1862.—Upon a stout rectangular frame is

mounted a revolving cylinder, provided on its periphery with a series of curved buckets. Below the front part of this cylinder is suspended the rear end of a shovel, its front end being connected to a vertical screw passing through the forward end of the frame, so that the front end of the shovel may be adjusted higher or lower as desired. At the rear of the cylinder is arranged a shaking shoe and chute board, which latter conducts the potatoes free from earth to hoppers attached to the rear of the main frame. The bottoms of the hoppers are pivoted and provided with handles, so that they can be tilted to allow the potatoes to fall into sacks, which may be attached to the bottom of the hoppers.

Claim.—First, the arrangement of the shovel O, screw bolts R R, pinions *k k m n*, crank *o*, and axle P, for raising and lowering the shovel, in combination with the frame A and revolving buckets *b* D, operating in the manner and for the purpose described.

Second, the shaking shoe K, chute board *e*, and revolving buckets *b* D, in combination with the shovel O and hoppers M, provided with tilting bottoms *q*, when arranged and operating in the manner and for the purpose described.

No. 37,101.—MARK LEVY, of New York, N. Y.—*Improvement in the Manufacture of Illuminating Gas.*—Patent dated December 9, 1862.—This invention consists in combining or mixing together the gases generated from wood and from oil, and conducting them when thus mixed through a series of flues, by which they are subjected to further heating, for the purpose of more effectually mixing them and depriving them of impurities.

Claim.—The arrangement of mixing the gases, generated in separate retorts, from wood and from oil, or its equivalent, and then reheating the thus mixed gases before the same are allowed to pass into the purifier and gasometer, in the manner and for the purpose substantially as described.

No. 37,102.—DIOCLESIAN LEWIS, of Boston, Mass.—*Improved Book Rack.*—Patent dated December 9, 1862.—This device consists of a rack similar in form and construction to an ordinary ladder, in combination with a vibrating frame or brace, which is hung at or near the centre of the said rack, and a strap, one end of which is fastened to the foot of the vibrating frame, and the other, passing under the foot of the rack, is hooked to the different rounds of the rack as may be necessary in order to give the proper slope to the said rack. Combined with the rack and bar are vibrating fingers or clamps fastened to the bar in an inclined position, so as to hold open a book placed upon it. A bar provided with hooks, so as to hook upon the rack, is used for supporting the book.

Claim.—First, the combination of the rack 1 2, brace 3, and strap 5, as hereinbefore set forth.

Second, the combination with the rack 1 2 of the bar 7, as described.

Third, the combination with the rack 1 2 and bar 7 of the fingers 9 9, for the purpose and in the manner set forth.

No. 37,103.—DENNIS G. LITTLEFIELD, of Albany, N. Y.—*Improvement in Stoves.*—Patent dated December 9, 1862.—Antedated November 25, 1861.—The object of this invention is, first, so to construct the grate as to dispose of the slate or other incombustible substances without tilting the grate to empty the same; second, to more completely utilize the heat produced by the combustion of the volatile as well as the fixed portions of the fuel; third, to communicate a greater degree of heat through the outer surrounding case from the chamber surrounding the fire-pot; and fourth, to obviate the danger or annoyance of explosion, caused by the admission of atmospheric air to the highly inflammable gas, when the stove is opened to be replenished with coal.

Claim.—The mill grate A B, constructed and operating substantially as and for the purposes herein specified.

Also, the construction of the fire-pot D, with outwardly projecting combustion mouths or outlets *d d* opening immediately into and in combination with the chamber E, for the purpose herein specified.

Also, the form and arrangement of the case M, in relation to and in combination with the fire-pot D and chamber E, substantially as and for the purposes herein set forth.

Also, compelling the draught to pass upward through the supplying cylinder H while kindling the fire in the stove, and immediately previous to as well as during the act of replenishing the cylinder with coal, for the purpose specified, and this irrespective of the special construction by which the same is effected.

Also, the central chamber above the supplying cylinder H communicating with the exit flue *p*, whereby any air that passes into said chamber by the cover R is conveyed to the exit flue, as specified.

Also, the divided flue M around the chamber I, and forming a communication between the front of the chamber E and the exit flue *p*, whereby the products of combustion are conveyed to the chimney without interfering with the action of the said chamber, and the radiation of heat from the stove is properly distributed, as herein set forth.

Also, the sliding plate or valve N, so arranged that it necessarily closes the opening *o* from the chamber E to the flue K when the aperture *n* from the supply cylinder H to the central chamber I is opened, and *vice versa*, whereby the draught is directed at pleasure, either up through the chamber E or the supply cylinder H, for the purposes herein set forth.

No. 37,104.—DAVID MAYDOLE, of Norwich, N. Y.—*Improvement in Skate Fastenings.*—Patent dated December 9, 1862.—This invention consists in having a hook at the back part of a heel plate attached to the skate, and a plate provided with the parallel slots attached to the heel of the boot or shoe, the parts being so arranged that the hook on the skate may be passed through the slots in the plate which is attached to the heel of the boot or shoe and firmly fastened. The front part of the skate may be attached to the foot in any convenient manner.

Claim.—The hook F attached to or formed on the plate E at the back part of the skate in combination with the plate G attached to the heel of the boot or shoe and provided with parallel slots *c c*, or any equivalent staple, to receive the hook F, when used in connexion with any suitable fastening for holding the front of the skate against the sole of the boot or shoe, substantially as and for the purpose specified.

No. 37,105.—OLIVER W. MORLEY, of Ellisburg, N. Y.—*Improved Buckle.*—Patent dated December 9, 1862.—At each side of the frame or bow of a buckle are lugs, the ends of which are connected by a cross-bar or rod. To the centre of this rod is attached a plate by means of an eye. At one end of the bow or frame is a pin which projects from the bow in the same direction as the lugs and passes through a hole in the hinged plate.

Claim.—The combination with the hinged plate B and cross-bar *b* with the frame A and pin C, in the manner herein shown and described.

No. 37,106.—MORGAN PAYNE, of Cardington, Ohio.—*Improvement in the Construction of Dashers for Churns.*—Patent dated December 9, 1862.—This invention consists in the employment of two dashers placed upon one and the same shaft in such a manner that when the shaft is turned in one direction both dashers serve to agitate the milk sufficiently to produce the butter, and when the motion of the shaft is reversed the upper dashers rise to the surface and serve to collect the butter in masses, so as to facilitate its removal.

Claim.—The shaft A, in connexion with the rod B and dashers *e e* and the arm C, with the dashers *d d*, the whole arranged in the manner and for the purpose herein specified.

No. 37,107.—SILAS S. PUTNAM, of Dorchester, Mass.—*Improvement in Machines for Forging Horseshoe Nails.*—Patent dated December 9, 1862.—Reference to the specification and drawings will be necessary for a description of this invention.

Claim.—First, in combination with a revolving cam for operating four hammers in pairs of two, the arranging of said cam behind the pivots of the hammer helves, for the purpose of protecting said cam and its co-operative parts from the scales and heat of the nail-rods and hammers, and thus protecting them from cutting, wearing, and undue friction by the drying or burning of the oil, substantially as described.

Second, the method, substantially as herein described, of operating the cutter *n*, namely, by the lever M and slotted lever O.

Third, the block T and its connexions for stopping and holding the hammers, substantially as specified.

Fourth, regulating the throw of a pair of hammers by applying thereto the power of a supplementary spring, substantially in the manner set forth.

Fifth, operating the gauge lever V by the lever U, which forms part of the device for arresting the hammers.

No. 37,108.—SAMUEL J. REEVES, of Philadelphia, Pa.—*Improvement in Fagots for Wrought Metal Cannons, Hydraulic Pumps, &c.*—Patent dated December 9, 1862.—This invention consists in making a pile or fagot of wrought-iron, or of steel and wrought-iron, by wrapping one or more sheets of iron or steel around a hollow tube or solid bar of iron or steel until it assumes the required diameter, the said tube or bar forming a part and parcel of the pile or fagot, when drawn by rolling or hammering, and constitutes the part or portion from which the bore of the finished gun is formed.

Claim.—The making of the bore on which the sheets are wound and welded of sufficient size to margin the bore of the gun when finished, substantially as and for the purpose described.

No. 37,109.—JAMES ROBINSON, of Barnegat, N. J.—*Improved Cable Stopper.*—Patent dated December 9, 1862.—This invention consists in the employment of a hinged forked claw, the shank of which catches under a hinged dog, which is connected to and operated by a foot lever in such a manner that the claw, when brought to catch over the link of the cable, retains the same firmly, and prevents it from running out, and that by depressing the foot lever the shank of the claw is released and the cable freed.

Claim.—The arrangement of the hinged claw A, in combination with the rod or stem B, dog C, and foot lever D, all constructed and operating substantially as and for the purpose shown and described.

No. 37,110.—J. F. ROCHOW, of New York, N. Y.—*Improved Hoisting Apparatus.*—Patent dated December 9, 1862.—This invention consists in the arrangement of two cog-wheels having a different number of teeth, the one with the largest number of teeth being stationary, and the other being secured to the axle of the drum of the hoisting apparatus, in combina-

tion with the other cog-wheels having the same number of teeth, and attached to a tumbling shaft, which is carried around the centre of the drum shaft in such a manner that, by the combined action of the two wheels on the tumbling shaft and the differential wheels, a slow rotary motion is imparted to the drum shaft, and that the power applied to the tumbling shaft is multiplied in proportion to the number of teeth of the gear wheel on the drum shaft, divided by the difference between the number of teeth of the said wheel and that of the stationary wheel.

Claim.—The arrangement of the differential wheels *a b*, in combination with the box C, main shaft B, tumbling shaft D, with pinions *c d* and drum E, all constructed and operating substantially as and for the purpose herein shown and described.

Also, the tumbling shaft D, when the same is arranged with two wheels or pinions *c d* to operate in combination with the wheels *a b*, substantially in the manner and for the purpose set forth.

No. 37,111.—ANSON ROWE, of Atalissa, Iowa.—*Improved Grain Separator.*—Patent dated December 9, 1862.—Over the upper riddle, which is of the common construction, is placed a metallic plate which serves as a cover for the said screen, and prevents all light foreign matter from passing upon it, the space between the discharge end of the feed-board and the inner end of the upper riddle being sufficiently great to allow the fan to eject the said substances through the same, and the plate preventing them from falling upon the upper riddle. Directly below the lower riddle is placed a screen or sieve having a chute beneath it, the said screen being inclined in a reversed direction to the riddles.

Claim.—First, the plate K placed on or over the upper riddle H, and in relation with the feed board D and fan L, as and for the purpose specified.

Second, the combination of the sieve M, riddles H H, plate K, feed-board D, and fan L, arranged for joint operation as and for the purpose herein set forth.

No. 37,112.—THOMAS SAULT, of Seymour, Conn.—*Improvement in Machinery for Covering Wire with Caoutchouc Gutta Percha.*—Patent dated December 9, 1862.—This invention consists in the employment of a screw working in the bore of a cylinder into which the gum is fed, and from which it is forced by the screw through or into a die of the proper size and form to produce the exterior of the covering tube or other article to be manufactured. For the covering of wire or the manufacture of tubing, the screw is made hollow for the reception of a mandrel through which the wire to be covered passes, or upon which the interior of the tubing is formed. The cylinder is so constructed as to enable it to be supplied with gum without stopping the operation of the screw, and thus operates continuously to make a tube or cover a wire of any length or to fill a mould of any required size.

Claim.—First, the combination of a cylinder A, a hollow screw B, and a central mandrel C, passing through the hollow screw, substantially as herein specified.

Second, the construction of the cylinder A, containing the screw B with a throat *c* and internal cavity *b*, arranged substantially as and for the purpose specified.

Third, feeding the wire to be covered with the gum by the movement of the gum itself produced by the screw B or other device for forcing it through the forming die, substantially as herein specified.

No. 37,113.—GEORGE SHERWOOD and HENRY M. SHERWOOD, of Chicago, Ill.—*Improved Mode of Fastening the Covers of Ink-Wells.*—Patent dated December 9, 1862.—This invention is explained by the claim and engraving.

Claim.—Fastening the covers of ink-wells thereto by means of pins *a a* with enlarged heads acting against the inclined edges of concentric slots *f f* in the raised flange E of the well, substantially as and for the purpose herein specified.

No. 37,114.—W. C. SHEPHERD, of Saratoga Springs, New York.—*Improvement in Boot and Shoe Lasts.*—Patent dated December 9, 1862.—This invention consists in a method of attaching the removable block of the last to the latter in such a manner that it may be detached from the last by the hook which is usually employed for drawing the last from the boot or shoe.

Claim.—The spring catch E, in combination with the polygonal plate E′, said parts being constructed and arranged substantially as and for the purpose specified.

No 37,115.—EDWARD STERN, of Dorchester, Mass., and JAMES S. NEWELL, of Newton, Mass —*Improved Machine for Cutting Button Holes.*—Patent dated November 9, 1862.—This invention consists of a button-hole cutting machine having a triangular or trapezoidal bed so arranged and applied in relation to the cutter as to be capable of being moved in one plane and transversely of such cutter. In combination with the bed and cutter is an adjustable gauge K which serves to preserve the cutter at a like distance from the edge of the cloth while cutting each of the several button-holes. Attached to the gauge K is a secondary gauge consisting of a slotted bar so arranged in relation to the cutter as to make the slits at equal distances or at such other distances apart as may be desirable.

Claim.—A button-hole cutter as made with a triangular or trapezoidal bed B, so arranged and applied with respect to the cutter A as to be capable of being moved in one plane and transversely of such cutter, substantially as described.

Also, the adjustable gauge K, in combination with the bed B and the cutter A, arranged in manner and so as to operate together substantially as specified.

Also, the auxiliary or secondary gauge L, in combination with the cutter A and the bed B, the latter being constructed and arranged so as to operate substantially as specified.

No. 37,116.—LA ROY SUNDERLAND, of Boston, Mass.—*Instrument for the Cure of Spermatorrhœa.*—Patent dated December 9, 1862.—The nature of this invention is explained by the claim and engraving.

Claim.—First, the use of an adjustable spring lever or levers armed with sharp points or teeth, and arranged substantially as herein described and for the purpose set forth.

Second, the combination of the ring *a* and spring lever or levers *b*, arranged together, substantially as herein described, and forming a seminal guard to be used for the prevention and cure of spermatorrhœa.

No. 37,117.—W. R. THOMAS, of Catasangua, Penn., and M. EMANUEL, jr., of same place.—*Improvement in Blasting Compounds.*—Patent dated December 9, 1862.—This invention relates to a blasting compound for which letters patent were granted to the said Thomas and Emanuel on March 11, 1862. The nature of the invention is stated in the claim.

Claim.—The blasting compound made of nitrate of soda, sulphur, chlorate of potash, starch and ground bark, or other absorbent carboneceous material, substantially in the manner and in about the proportions herein specified.

No. 37,118.—JOEL WEBSTER, of Brooklyn, N. Y.—*Improvement in Sadirons.*—Patent dated December 9, 1862.—This device is so constructed as to admit of a ready attachment to or detachment of the handle from the main body at the moment the latter is placed in position upon a heated stove plate. At each end of the wooden handle are secured uprights fitting at their lower ends into a sadiron. To one of these uprights is pivoted a thumb lever, its lower extremity terminating in a catch to engage with a corresponding lip projecting from the sadiron, by means of which the handle may be readily attached to or detached from the sadiron.

Claim.—The thumb lever M, in combination with the uprights E and E′ and main portion A, substantially as described.

No. 37,119.—LUTHER C. WHITE, of Waterbury, Conn.—*Improved Mode of Fastening Lamp Chimneys and Shades on Burners.*—Patent dated December 9, 1862.—This device consists of a piece of metal provided with three projections or teeth and fastened to the burner by means of a bolt placed just below the rim. A piece of wire, curved with the burner, is placed in the interior of the same, one end of which works in the lower projection, and the other end in one of the small perforations in the burner, so that the wire acts as a lever prop when the projections are brought either backward or forward to adjust the chimney.

Claim.—First, the peculiar construction of hawk's-bill B, or its equivalent, as shown in Fig. 1, Fig. 2, Fig. 3, and Fig. 4, and the mode of throwing it either backward or forward, and holding it in either position by means of the wire-lever J, or its equivalent, the ends of said lever being loose in perforations *h* and *k*.

Second, the middle projectile or tooth *f*, or its equivalent, as shown in Fig. 1, Fig. 2, and Fig. 4, which throws the hawk's-bill forward by gently pressing the base of the chimney upon it, independently of the upper projectile *e*, which secures the chimney to the burner.

Third, the position and the peculiar construction of the lever J, or its equivalent, as shown in Fig. 1, and Fig. 2, which throws the hawk's-bill either backward or forward.

Fourth, the hawk's-bill B, or its equivalent, in combination with the mode of attaching it to the burner without solder by means of the bolt supports *d* formed in the shell of the burner, as shown in Fig. 5, the whole being arranged substantially as and for the purpose herein described.

No. 37,120.—WILLIAM J. WILCOX, of New York, N. Y.—*Improved Apparatus for Refining Lard.*—Patent dated December 9, 1862.—This invention consists in the application, in an apparatus for refining lard, of a worm enclosed in a cask which can be wholly or partially filled with cold water, the said worm being connected at one end to a pipe leading from the bottom of a heating pan, and at the other end to a spout discharging into the cooling vat in such a manner that the lard in passing from the heating pan to the cooling vat is cooled down to such a degree that very little stirring in the cooling pan is needed to bring the lard to the desired consistency. A regulating cock is inserted into a pipe leading from the bottom of the cask which contains the worm to the waste or overflow pipe, so that the quantity of water in the cask, and with it the temperature of the lard passing through the worm, can be regulated.

Claim.—First, the application or use, in combination with an apparatus for refining lard, of a worm C enclosed in a cask D, constructed and operating substantially as and for the purpose herein described.

Second, the arrangement of the regulating cock *g*, in combination with the worm C, cask D, overflow pipe *e*, heating pan A, and cooling vat E, all constructed and operating as and for the purpose specified.

No. 37,121.—F. R. WILSON, of Auburn, Cal.—*Improved Device for Shrinking Tires.*—Patent dated December 9, 1862.—Upon a suitable bed or base plate are placed two levers, each formed by two parts connected by a pivot so as to act both as levers and jaws. The outer or free ends of the parts of the levers are connected by rods to a centrally pivoted bar D, the axis or pivot of which has a lever E fitted upon it. On the base plate is placed centrally and longitudinally a guide, on which two slides are placed and allowed to move freely, and to the inner end of each slide is attached a segment guide J, one of which guides has a convex and the other a concave face side.

Claim.—The jointed levers B B; in combination with the adjustable guides J J, the levers B B being connected to a pivoted bar D having a lever E attached, and all arranged to operate as and for the purpose herein set forth.

No. 37,122.—WILLIAM W. WRIGHT, of Killingly, Conn.—*Shoe Knife.*—Patent dated December 9, 1862.—Secured to the side of the knife by means of a screw is a curved guard which is set against and across the point of the knife, the said point resting in a small dent in the guard. The other end of the guard bears against an eccentric wheel or tumbler, so arranged that by turning the latter the guard can be adjusted to the point of the knife when it becomes worn from use.

Claim.—Combining with the blade of the knife a guard and wheel or tumbler in the manner set forth, viz., by forming the guard as described, and screwing it to the blade of the knife with the dent in the flat end thereof on the point of the knife, and the bar at the other end thereof, resting on the wheel or tumbler, as described.

No. 37,123.—WILLIAM P. BARKER, of Grand Rapids, Mich., assignor to Himself, JAMES VAN BUREN, and NELSON BLANCHARD, of Grand Rapids, aforesaid.—*Improved Machine for Binding Grain.*—Patent dated December 9, 1862.—This invention consists of a device for binding grain which may be connected to and arranged to operate in conjunction with an ordinary reaper, so that the grain as it is cut may be gathered into gavels and bound into sheaves, the latter being discharged from the machine, and the whole work performed automatically and operated by the draught movement of the machine.

Claim.—First, the travelling or reciprocating hooks H H attached to the endless belts E E′, in combination with the arm J″, provided with the nippers *m m′*, and the elastic band C* attached to the bar A′ and arm J″, all arranged to operate as and for the purpose set forth.

Second, the shafts V W, the former being provided with the screw *v*, fork *h′*, and the latter being provided with the hook Y, knife or cutter X, and the fork *w*, said shafts being operated as shown, and in connexion with the arm J″ and the cord or rope K, for the purpose specified.

Third, the combination of the hooks H H, arm J″, provided with the nippers *m m′*, elastic band C*, shafts V W, and the cord or rope K, all combined and arranged to operate as and for the purpose herein set forth.

No. 37,124.—JOSEPH H. BAIRD, of Waterbury, Conn., assignor to JEDEDIAH WILCOX, of New York, N. Y.—*Improvement in Machines for Applying Clasps to Hoop Skirts.*—Patent dated December 9, 1862.—This invention consists in the combination of a rest for the hoops of the skirt with clasp-feeding and clasp-supplying devices by means of a clasp-carrying device which receives the clasps in succession and carries them to the skirt hoop as it is presented to the machine. The clasp-carrier is so constructed and combined with the clasp-supplier that it not only carries the clasp, but also forms a gate which prevents the escape of clasps from the clasp-supplier.

Claim.—The combination of a hoop-rest, a clasp-feeder, a clasp-supplier, and a moving clasp-carrier, the combination as a whole operating substantially as set forth.

Also, the combination of a clasp-carrier with the clasp-supplier in such a manner that the clasp-carrier forms a gate or stop to prevent the escape of clasps, the combination as a whole operating substantially as set forth.

Also, the combination of a clasp-carrier with the hoop-rest in such manner that the clasp-carrier forms one of the members by which the clasp is clinched upon the hoop.

No. 37,125.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to Himself and WARDER & CHILD, of the same place.—*Improvement in Machinery for Threshing and Separating Grain.*—Patent dated December 9, 1862.—This invention consists in mounting the blades or floats of the fan directly upon the cross-shaft or counter shaft, from which the remainder of the mechanism is driven, thereby dispensing with an independent fan shaft and much of its attendant mechanism. The blades or floats of the fan are divided in such a manner that the driving or line shaft may pass between them, in order to drive the counter shaft from a point near its centre, so as to preserve the mechanism from torsion and strain. The threshing cylinder is driven directly from the fan shaft.

Claim.—First, mounting the fans directly upon the cross-shaft or counter shaft, from which the remainder of the mechanism is driven, substantially in the manner described, for the purposes set forth.

Second, the combination of the line shaft, counter shaft, and fans, substantially as and for the purpose described.

Third, driving the threshing cylinder directly from the fan shaft, substantially in the manner described.

No. 37,126.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to Himself and WARDER & CHILD, of the same place.—*Improvement in Machinery for Threshing and Separating Grain.*—Patent dated December 9, 1862.—This invention consists in combining with the grain belt and straw carrier a picker shaft placed between the two and driven by gearing from the grain belt. Beneath the grain belt is located a supplementary spiked cylinder and concave, to receive the grain as it falls from the belt, and to thresh out any heads that may have escaped through the threshing cylinder. Beneath the supplementary cylinder is a series of inclined boards placed one above the other, so that the grain may fall from the cylinder upon them, and be exposed to the fan blast in passing from one board to another. Combined with the inclined board is a valve which regulates the force of the blast passing between them.

Claim.—First, the combination of the grain belt, straw carrier, and picker shaft, when arranged and operated in the manner, and for the purpose set forth.

Second, a supplementary threshing cylinder located beneath the grain belt for the purpose of threshing out any heads which may escape the threshing cylinder, when arranged and operating as herein described.

Third, the combination of the supplementary cylinder and the fans with the inclined boards J J′, substantially in the manner described, for the purpose set forth.

Fourth, the combination of the inclined boards J J′ and regulating valve K with the fans D, as described, for the purpose of regulating the blast, as set forth.

No. 37,127.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to Himself and WARDER & CHILD, of the same place.—*Improvement in Machinery for Threshing and Separating Grain.*—Patent dated December 9, 1862.—This invention will be understood from the claim and engraving.

Claim.—First, mounting the blades of the fans directly upon the counter shaft and inside the driving pulley, substantially in the manner described, for the purpose set forth.

Second, driving the threshing cylinder directly from the fan pulleys, substantially as and for the purposes set forth.

Third, enclosing the main portion of the driving mechanism within the fan case, for the purpose described.

Fourth, making a portion of the fan case removable, as described, for the purpose of affording access to the driving mechanism.

No. 37,128.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to Himself and WARDER & CHILD, of the same place.—*Improvement in Machinery for Threshing and Separating Grain.*—Patent dated December 9, 1862.—In this machine the driving or line shaft, through which motion is communicated to the machine from the prime mover, is mounted upon a loose bracket or bearing pivoted to the counter shaft, and capable of turning freely around it in a vertical plane, so that the position of the driving shaft may be varied without deranging the gearing. The swinging bracket is enclosed in the fan case in such a manner that, when in its lowest position, the bracket shall be supported by the fan case, and yet be free to play up and down within certain limits. Diagonal braces are placed on the front part of the frame, so as to obtain greater space for the play of the line shaft.

Claim.—First, mounting the line shaft, through which motion is communicated to the mechanism from the prime mover in or upon a swinging bracket pivoted to the counter shaft, and capable of twining freely round it in a vertical plane, substantially in the manner described.

Second, enclosing the swinging bracket within the fan case, substantially in the manner and for the purposes described.

Third, the use of diagonal bracing on the front end of the frame, in combination with a line shaft having vertical play, substantially as described and for the purpose set forth.

No. 37,129.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to Himself and WARDER & CHILD, of the same place.—*Improvement in Machinery for Threshing and Separating Grain.*—Patent dated December 9, 1862.—In this machine the grain-belt frame is constructed of diagonally braced lattice work, held together by nuts and screw rods, so as to admit of its being readily taken apart and put together. Upon the upper surface of the bottom of the grain-belt frame is arranged a series of diverging scattering boards, for the purpose of distributing the grain upon the supplementary cylinder as it falls from the grain belt or straw carrier. The shafts and gearing by which the straw carrier and picker are driven are mounted in a solid metallic plate or frame on each side of the grain belt for the purpose of preventing the binding or straining of those parts of the mechanism.

Claim.—First, the combination of the diagonal braces b^2 and screw rods b^3 b^4, with the longitudinal beams *b*, in the manner and for the purpose described.

No. 37,134.—GEORGE H. JOHNSON, of New York, N. Y., assignor to Himself and W. S.

Second, the combination of the dispersing boards and supplementary cylinder, substantially as described and for the purpose specified.

Third, mounting the shafts and gearing by which the straw carrier and picker shaft are driven, in a solid metallic frame on each side of the grain-belt frame, as and for the purpose described.

No. 37,130.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to Himself and WARDER & CHILD, of the same place.—*Improvement in Machinery for Threshing and Separating Grain.*—Patent dated December 9, 1862.—This invention consists in mounting the fans directly upon the cylinder shaft and inside of the threshing cylinder, for the purpose of rendering the construction less expensive, and requiring less power in driving. The threshing cylinder is formed of parallel bars, and provided with jaws on its ends, and combined with a blast spout so arranged that the air shall be drawn from the interior of the cylinder through the fans, and discharged through the blast spout upon the screens or riddles.

Claim.—First, mounting the fans directly upon the cylinder shaft, and inside the threshing cylinder, substantially in the manner described, for the purposes set forth.

Second, the combination of an open-barrelled cylinder having fans in its ends, with the blast spouts, when arranged and operating substantially in the manner herein described, for the purpose specified.

No. 37,131.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to Himself and WARDER & CHILD, of the same place.—*Improvement in Machinery for Threshing and Separating Grain.*—Patent dated December 9, 1862.—This invention consists in forming an independent frame inside the grain-belt frame, so as to provide a space between them in which to locate the driving pulleys and winnowing spouts. In combination with this double frame, the grain belt, straw carrier, beater, and picker are driven from the conveyer shaft, whereby the driving bands are kept inside the framing.

Claim.—First, constructing an independent frame or trough inside the grain-belt frame, substantially in the manner described, so as to form a space in which to locate the driving pulleys, &c.

Second, in combination with an independent frame, driving the grain belt, straw carrier, beater, and picker from the conveyer shaft, substantially in the manner and for the purpose described.

No. 37,132.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to Himself and WARDER & CHILD, of the same place.—*Improvement in Machinery for Threshing and Separating Grain.*—Patent dated December 9, 1862.—This invention consists in mounting the line shaft and driving gearing in a swinging jack of a peculiar construction, so as to allow the line shaft to play freely around the counter shaft in a vertical plane without deranging the gearing. Combined with the swinging jack are a horizontal and a vertical driving shaft, so that the driving power may be applied either horizontally or perpendicularly to the mechanism, as may be required. The counter shaft is mounted in pipe boxes, on which the bearings of the swinging jack turn, so as to relieve the counter shaft from the strain of the jack.

Claim.—First, the combination of the counter shaft and swinging jack, when arranged and operating substantially as and for the purpose set forth.

Second, the combination with a swinging jack of both a horizontal and a vertical driving shaft, substantially in the manner and for the purposes described.

Third, the combination of the pipe boxes, in which the counter shaft turns with the side branches of the swinging jack, substantially in the manner described, for the purpose of relieving the shaft from the weight of the jack, as set forth.

No. 37,133.—JACOB H. HARNLY, of Penn Township, Pa., assignor to Himself, JACOB HARNLY, G. R. HENDRICKSON, and H. B. DUNLAP, of same place.—*Improved Mode of Operating the Raking Attachment on Harvesters.*—Patent dated December 9, 1862.—Reference to the specification and drawings will be necessary for a description of this invention.

Claim.—First, the combined action of the crank arm and its clutch C, by means of the spring *c* pressing it against the lugs on the axle *a* and the terminus of the rod E, connected with the ratchet lever D *g* pressing the clutch out, thereby jointly controlling the crank motion.

Second, the combined foot lever G, with its rod F, operating against the jointed ratchet lever E D *q*, for regulating the speed of the rake at will, applied in the manner specified.

Third, the rack bar B, with its hook at one end and eccentric attachment to the axle at the other, in combination with the ratchet lever D *q*, click rod O, and connecting rod M, arranged in the manner and for the purpose specified.

Fourth, the rock shaft U, with its curved rake support W, in combination with the tripper rod P, rods O M, and notched post *t* operating in the manner and for the purpose specified.

Fifth, the arrangement and combination of the crank arm C with the connecting rods K L, vibrating bar I, and notched spring rod or holder *z*, all operating in unison with the rack bar B by the revolution of the driving wheel on its axle A, in the manner set forth.

No. 37,134.—GEORGE H. JOHNSON, of New York, N. Y., assignor to Himself and W. S. SAMPSON, of the same place.—*Improvement in the Construction of Grain Bins.*—Patent dated December 9, 1862.—This invention consists in the employment of auxiliary cylindrical bins, in combination with the principal bins, when the latter are so arranged as to have their sides come about in contact, and the former are arranged so as to occupy the spaces between the larger bins. Ventilating flues or columns are formed of the several spaces left between the series of cylinders. With the series of bins are combined horizontal bond plates, so constructed and arranged as to unite or lock together the several bins or cylinders.

Claim.—First, the combined arrangement of the smaller cylinders B with the larger ones A, for the purpose of utilizing the space between the larger ones for storage purposes, and rendering the whole structure more capable of sustaining the pressure of the contents of the cylinders, substantially as described.

Second, the method of interlocking the layers of horizontal bond plates *a b*, in the manner and for the purposes described.

Third, the employment of ventilating flues C, in combination with the grain bins, substantially as described.

No. 37,135.—SAMUEL N. LONG, of Chatham, Mass., assignor to the CHATHAM LOCK COMPANY, of same place.—*Improved Lock.*—Patent dated December 9, 1862.—This invention consists in constructing the key of the lock with a sliding bit, and having the pin or pintle on which the key turns in locking and unlocking the lock of such a shape as to form a cam which, as the key is turned, will throw the bit and cause the latter to act upon the bolt, which is constructed of a series of tumblers.

Claim.—The bolt C formed of a series of tumblers *a*, in combination with a key provided with an extension bit F and a cam-shaped pin or pintle D, or its equivalent, all arranged as and for the purpose set forth.

No. 37,136.—MOSES MARSHALL, of Lowell, Mass., assignor to S. S. BUCKLIN, of Brookline, Mass.—*Improvement in Machines for Pegging Boots and Shoes.*—Patent dated December 9, 1862.—This invention consists in surrounding the piston by a cylinder or sleeve, against which the upper end of the spring abuts, whereby an increase of space for the accommodation of the spring is obtained, and the piston, no longer connected directly to the spring, may at any time be withdrawn by removing the screw by which it is connected to the sleeve, while the body of the machine, no longer being required to accommodate the entire length of the spring, may at the same time be shortened.

Claim.—The combination of the sleeve G with the plunger B and spring C operating in the manner substantially as described.

No. 37,137.—JOHN MCCALL, of London, England, and BEVAN G. SLOPER, of Walthamstow, England, assignors to J. and W. J. UNDERWOOD, of Boston, Mass.—*Improvement in the Preservation of Articles of Food.*—Patented in England October 24, 1861.—Patent dated December 9, 1862.—This invention consists in introducing into the cans some material or composition for which oxygen has a greater affinity than for the meat or other article of food to be preserved.

Claim.—The within described process of preserving articles of food by the introduction of sulphite of soda, or its equivalent, into the cans in which the articles are preserved, in the manner and for the purpose herein described.

No. 37,138.—FRANKLIN PERRIN, of Cambridge, Mass., assignor to Himself and DAVID C. PERRIN, of Roxbury, Mass.—*Improved Manufacture of Palm Leaf Fabric.*—Patent dated December 9, 1862.—This fabric is composed of a warp of spun thread and a weft of narrow strips or bands of palm leaf.

Claim.—The new or improved fabric or manufacture, as made with warps of spun thread in pairs, and its weft of strips of palm leaf, arranged together, substantially as described.

No. 37,139.—WILLIAM S. SAMPSON, of New York, N. Y., assignor to Himself and G. H. JOHNSON, of same place.—*Improvement in the Construction of Fire-proof Grain Bins.*—Patent dated December 9, 1862.—This invention consists in constructing a grain bin of bricks formed with tongues and grooves so as to interlock interally, in combination with retaining plates of iron and tie rods for holding the brick-work together vertically.

Claim.—Forming the bricks or block of composition with tongues and grooves, or their equivalents, substantially as described, in combination with the plates B and rods *a*, as and for the purposes hereinbefore fully described.

No. 37,140.—ABNER C. AINGER, of Stockholm, N. Y., and SAMUEL W. WEBSTER, of same place, assignors to SAMUEL W. WEBSTER, of Stockholm, N. Y.—*Improvement in Cheese Frames.*—Patent dated December 9, 1862.—This apparatus consists of a movable frame provided with shelves for holding the cheese. This frame is pivoted to a stationary frame in such a manner as to admit of its being turned in a vertical plane. Upon one side of the pivoted frame is secured a block, to prevent the cheeses from falling out in turning.

Claim.—The removable back *h i*, constructed as described, and employed in connection

Claim.—The removable back *h i*, constructed as described, and employed in connexion with the pivoted frame *d e f*, in manner substantially as and for the purposes set forth.

No. 37,141.—ELBERT S. MAYNARD, of Hancock, N. Y.—*Improved Sleigh Brake.*—Patent dated December 9, 1862.—This invention consists of a roughened slide, which is attached to one arm of a lever, the said lever being operated by means of bars connecting with the tongue of the sleigh. One of these bars is provided with teeth acting upon a cogged wheel for operating a corresponding series of levers on the opposite side of the sleigh. By the action of the team upon the tongue the roughened slides are caused to project below the runners of the sleigh.

Claim.—The combined arrangement of the brake A, with lever B B, and jointed bars P T, when connected with the cogged wheel Q, and roller moving in the slot D, the whole operating and constructed in the manner described.

No. 37,142.—LEVI F. SMITH, of Stonington, Conn.—*Improvement in Tool for Forming the Necks of Bottles.*—Patent dated December 9, 1862.—The object of this implement is to form upon the inside of bottle necks, shoulders against which elastic stoppers may catch, to prevent them from being too easily forced out, which is effected by means of a centre piece of the form shown in the engraving, attached to a stem passing centrally between the jaws of a bent spring. To this stem is also pivoted a lever, one end of which passes through a loop formed upon one of the slides of the bow.

Claim.—First, the lever E, constructed, used and operated substantially as and for the purpose specified.

Second, the combination of the lever E with the centre piece D, the several parts being arranged as specified for forming shoulders in bottle necks, as set forth.

No. 37,143.—GEORGE G. EVANS, of Philadelphia, Pa.—*For Shoulder Strap Case.*—Patent dated December 9, 1862.—This invention consists in an arrangement of a border plate or frame, a detachable back plate, and certain other attachments, for the purpose of enabling a shoulder strap to be readily connected with and disconnected from the shoulder part of the coat, and also to enable the border plate to be readily detached from the strap for the purpose of being cleaned.

Claim.—First, the combination of the border plate A, the detachable back plate B, the studs *c*, and eyelets *e*, arranged and operating substantially as described.

Second, in combination with the above, the stud composed of the slotted link L, tube *m*, spring *n*, collar P, and screw R, substantially as described.

No. 37,144.—JOSEPH RIDGE, of Richmond, Ind.—*Improved Lamp for Burning Kerosene or Coal Oil.*—Patent dated December 9, 1862.—This invention is designed as an improvement upon a lamp for which a patent was granted to the said Ridge on the 15th day of April, 1862, and it consists in uniting the diaphragm and cylinder in one piece of glass and combining the same with the base and metallic frame, support and guard, and a short chimney.

Claim.—First, the diaphragm D and cylinder M, united in one piece of glass, substantially as represented, and constructed in the manner and for the purpose herein set forth.

Second, the said diaphragm and cylinder in combination with the base and metallic frame, support and guard, and short chimney C, substantially in the manner and for the purpose represented by the drawing and model, and set forth in this specification.

No. 37,145.—ELIJAH D. WILLIAMS, of Philadelphia, Pa.—*Improvement in Elongated Bullets.*—Patent dated December 9, 1862.—This invention consists in the combination with an elongated expanding bullet of a headed pin and a concave expanding disk, the disk having its concave side against the base of the bullet and the pin entering the cavity thereof, and operating to produce the flattening of the disk by which it is caused to expand against the walls of and enter the rifle grooves of the gun.

Claim.—First, the combination with elongated expanding bullets of a pin C and expanding disk B, applied and substantially as herein specified.

Second, fitting the pin to the cavity of the bullet in the manner substantially as herein specified, whereby the expansion of the bullet is caused to commence in the front part of its expanding portion and to be gradually continued toward the rear, as herein set forth.

No. 37,146.—JAMES E. ATWOOD, of Washington, D. C.—*Improvement in Knapsack Collars.*—Patent dated December 16, 1862.—This invention consists in attaching to the upper edge of an ordinary knapsack a heavy leather collar made to fit closely around the neck, and the ends extending down in front, to which straps may be attached.

Claim.—The use of a stiff leather collar constructed as described, when combined and arranged in the manner set forth, with a knapsack.

No. 37,147.—P. J. BERLIN, of Blairsville, Pa.—*Improved Portable Cider Mill.*—Patent dated December 16, 1862.—This invention consists in the employment of a scraper, which is attached to a lever that has an oscillating movement imparted to it by means of a wiper projecting from the master wheel, and which comes in contact with a spring lever once in each revolution of the master wheel, for the purpose of cleaning or scraping off the pomace from the crushing roller at certain intervals.

Claim.—The arrangement of the stripper D, oscillating lever *l*, spring lever *m*, and crushing rollers *d d'* with the wiper *m* and master wheel, in the manner herein shown and described.

No. 37,148.—MURRIN BURR, of Plymouth, Mass.—*Improvement in Fanning Mills and Grain Separators.*—Patent dated December 16, 1862.—The nature and object of this invention will be understood by reference to the claim and engraving.

Claim.—The arrangement of the horizontally-vibrating shoe D and the screen L, having an independent, vertical, reciprocating movement, for the purpose of agitating it sufficiently to discharge the foul seed and to prevent it from choking, as herein set forth.

Also, in combination with the screen L, the segments M M or their equivalents, pivoted to the shoe and having shanks *i i* resting in sockets of retaining cross-pieces P P, for the purpose of giving a reciprocating vertical movement to the said screen with the horizontal vibrations of the shoe, substantially as herein specified.

Also, the arrangement of the double-inclined spout R, spaces *r r* between the shoe and the walls of the mill, and seed receptacle *r*, so arranged as to discharge the foul seed around the lower screen U and collect it, substantially as herein described.

Also, the arrangement of the screen U, ledges *t t*, segments M' M' or equivalents, and blocks *s s* arranged in connexion with the shoe D, and walls B B of the mill, as herein specified.

No. 37,149.—DAVID W. CANFIELD, of New York, N. Y.—*Improvement in the Combined Shoulder Brace and Suspender.*—Patent dated December 16, 1862.—This invention consists in a method of arranging and combining the several straps and pieces of which the combined shoulder brace and suspender is composed, so as to serve as an effective shoulder brace and to support the pantaloons or other garment.

Claim.—The combined shoulder brace and suspenders, composed of the shoulder straps A A, back straps C C, front straps D D, and end pieces *a a* and *c c*, the whole arranged and combined as herein set forth.

No. 37,150.—MATTHEW CHAPMAN, of Greenfield, Mass.—*Improvement in Attaching Handles to Knives.*—Patent dated December 16, 1862.—The handle of the knife or other article is slotted longitudinally a certain distance from its inner end, and the knife or other article is provided with a flat tang equal in length to the said slot, the end of the tang having a V-shaped notch which is made to fit a corresponding projection in the slot, the parts being secured together by rivets.

Claim.—The flat tang C of the implement, provided with a V-shaped notch *a* at its end, in combination with the rivet D, and the slot *b*, in the handle B, provided with a projection *c* at its bottom, of such a shape as to fit into the notch *a* of the tang, substantially as and for the purpose herein specified.

No. 37,151.—JAMES M. CLARK, of Lancaster, Pa.—*Improvement in Alarum and Indicating Apparatus for Grinding Mills.*—Patent dated December 16, 1862.—This invention consists in the application to a grinding mill, of an apparatus which, in a locality distant from the millstones, shall indicate the run of the stones and condition of the feed, together with an alarm which shall indicate any variation in the speed of the runner and condition of the grinding from that desired by the attending miller.

Means are also provided whereby a variation in the speed of the runner and the flow of the feed may be properly regulated upon an alarm or indication being given to the miller that the grinding is not being properly done.

The construction does not admit of a brief description.

Claim.—First, the mode substantially as described of attaching the cross-tie *r*, and lever E, to the hoop *d*, for the purpose specified.

Second, a revolving grain cup or disk H, having couplings or lugs *h'*, and an attached tube *r6*, in combination with the mine *e*.

Third, applying to millstones a silent feed which is not affected by the act of setting the stones to grind either coarse or fine, substantially as described.

Fourth, suspending the revolving cup or disk H, from the cross-tie *r*, by the tube *r8*, or its equivalent, in the manner and for the purpose set forth.

Fifth, suspending the stationary grain guard H' over the eye of the stones, and so that it may be removed therefrom with the cross-tie *r*, for the purpose set forth.

Sixth, the combination and arrangement of the lever E, cross-tie *r*, and hoop *a*, substantially in the manner and for the purpose set forth.

Seventh, the combination of the feed-lever rod *m'*, and rod *m2*, substantially as and for the purpose set forth.

Eighth, operating an alarm and also an indicating apparatus, by means of a shaft which receives motion directly from the central portion of the millstone "runner," for the purpose specified.

Ninth, the combination of the alarm apparatus and the indicating apparatus with the centrally located shaft *i2*, substantially as described, and for the purpose set forth.

Tenth, a lighter staff *j*, in combination with the screw shaft *m*, substantially as described.

Eleventh, the head blocks 1 1 2, whether stationary or adjustable, in combination with the "way," L, substantially as described, for the purpose set forth.

Twelfth, applying to the bell shaft K′ a belt arm z5 and bell B′, which, by their centrifugal action, effect the alarm, in conjunction with head-blocks 1 and 1 2 or their equivalents, substantially as described.

Thirteenth, in a bell which constitutes a part of a centrifugal governor, so hanging the "clapper" on a pivoted spring arm that it has unobstructed freedom to move back and forth in the line of rotation of the bell, against the inner side of the bell, but is prevented from coming in contact with the bell in a direction at right angles thereto, substantially as described.

No. 37,152.—GILBERT M. COLE, of Folsom City, Cal.—*Improved Mode of Operating Railroad Pumps.*—Patent dated December 16, 1862.—This invention consists in the application of steam from the boiler of a locomotive to operate the piston or pistons of one or more cylinders connected with suitable mechanism with the plunger of a pump, so that when the locomotive arrives at a watering station the steam cylinders may be placed in connexion with the locomotive boiler, and the pump thus operated by steam instead of hand power to fill the tender.

Claim.—The application of one or more cylinders D, which are supplied with steam from the locomotive through pipes *c c′*, in combination with the pump B, as and for the purpose shown and described.

No. 37,153.—NELSON CROSS, of New York, N. Y.—*Improved Expanding Bedstead.*—Patent dated December 16, 1862.—The frame of the cot or lounge is constructed of a series of side and cross levers or bars so arranged that by a single movement the whole may be fully extended or folded compactly together.

Claim.—The combination of the side and cross levers or bars with the canvas top or bed piece, as and for the purpose aforesaid.

No. 37,154.—AUGUSTUS B. DAVIS, of Philadelphia, Pa.—*Improved Straw and Grain Separator for Threshing Machines.*—Patent dated December 16, 1862.—Above the perforated platform of the shaker frame are a series of shafts, each shaft having its bearing in the opposite boards of the frame, and furnished at one end with a pinion having its end projecting beyond the frame. These shafts are provided with curved teeth and are termed "rocking rakes."

The pinions of part of the shafts gear into racks secured to the under side of the upper bar of the reciprocating frame, while the pinions of the other shafts gear into similar racks secured to the upper side of the lower bar of the same frame, so that as the rack frame reciprocates, the curved teeth of the first named shafts will vibrate in one direction simultaneously with the vibration of the arms of the latter named in the opposite direction.

Claim.—First, separating the straw from the grain in threshing machines by means of a series of rocking rakes, arranged in respect to and operating in unison with each other, substantially as set forth.

Second, imparting the desired motion to the said rocking rakes by means of reversed racks, arranged on a reciprocating frame, in relation to pinions on the shafts of the said rakes, substantially as set forth.

No. 37,155.—WILLIAM DENKMAN, of Washington, D. C.—*Improvement in Hot Air or Caloric Engines.*—Patent dated December 16, 1862.—This invention relates to a caloric engine in which the air is heated in chambers separate from the driving cylinder one stroke or more in advance of the time at which it is used, and at the instant required is applied in full force to the driving piston. In combination with the above is an air-pump to supply the said heating chambers with cold air.

Claim.—The use of a plurality of separate heating chambers, operating successively in connexion with each working end of the driving cylinder K, substantially as set forth, to admit of heating the air in advance of the time at which it is used.

Second, an air-pump L, employed in combination with heating chambers, substantially as set forth in the foregoing claim, to supply the said chambers successively with cold air.

No. 37,156.—JACOB DUNTON, of Philadelphia, Pa.—*Improved Tourniquet.*—Patent dated December 16, 1862.—This device consists of a series of slotted plates to the opposite sides of which are attached straps and used in connexion with pads, all so arranged as to enable the same to be readily adjusted to suit the size of different limbs.

Claim.—The combination of the adjustable slotted plates A A A′ A′, pads F F′, and straps G G′, as set forth.

No. 37,157.—JAMES B. EADS, of St. Louis, Mo.—*Improved Wave Propellers for Shallow Water.*—Patent dated December 16, 1862.—This invention consists in the use of a chamber filled with water by atmospheric pressure, above the level of the water in which the vessel floats, and in using a large propeller on vessels of light draught, the propeller finding a resisting medium in the wave or column of water thus made in the chamber which shall entirely or nearly so, cover it.

Claim.—Providing light-draught vessels with a chamber, in which the propeller works when said chamber is filled with water by atmospheric pressure, to a height above that of the water in which the vessel floats, for the purpose and in the manner substantially as herein described and represented.

No. 37,158.—ROBERT NELSON EAGLE, of New York, N. Y.—*Improvement in Riding Stirrups and their Covers.*—Patent dated December 16, 1862.—The nature and object of this invention are explained by the claim.

Claim.—First, giving any desired longitudinal, lateral, or oblique inclination to the tread of a stirrup (with arms of equal length or with the inner arm the shorter,) by means of the location given to the point of suspension, substantially as hereinbefore described.

Second, a metal cap or its equivalent employed to connect the arms of a stirrup, and constituting the means of attaching the suspending straps, and for confining the upper part of the cover, when one is used.

Third, a cover composed of two or more pieces of leather or its equivalent, and applied substantially as hereinbefore described.

Fourth, the combination of the rawhide or pelt with the frame or body of a stirrup, substantially as and for the purposes specified.

Fifth, the arrangement of the shaft H, in inclined positions, as represented in Fig. 6, and described, for the purposes specified.

Sixth, the combination of an adjusting suspension with a stirrup or its cap, substantially as and for the purposes set forth.

Seventh, giving to the sides or arms of a stirrup, whether of wood or other material, an oblique direction in front, and a perpendicular direction or line in rear, substantially as represented in Fig. 4, or the converse or described equivalent thereof, for the purpose specified.

No. 37,159.—GILBERT C. EATON and SAMUEL W. TURNER, of Cleveland, Ohio.—*Improvement in Centrifugal Guns.*—Patent dated December 16, 1862.—This invention relates to the construction of an engine by means of which balls of various sizes may be discharged by compound centrifugal force alone, the balls being introduced between two grooved arms which revolve with great velocity, and unitedly form what is denominated the barrel, the several parts being so arranged that any desired altitude or range can be given to the projectile.

Claim.—First, the stirrup I and bridge-tree I′, in combination with the plate G and turn-table G′, arranged as specified, for the purpose of giving horizontal range to the ball.

Second, the turn-table G′, in combination with the articulation K′ K″, for the purpose set forth.

Third, the frame M M′, in combination with the articulation K′ K″, for giving altitude to the projectile, as specified.

Fourth, the arms T T′, operating in concert within the frame M M′, for the purpose specified.

Fifth, the stops *g h*, operated as and for the purpose set forth.

Sixth, the clutches *p* and weighted lever *p′*, in combination with the cam W, arranged and operating as and for the purpose specified.

No. 37,160.—WILLIAM S. EAGLE, of Brooklyn, N. Y.—*Improved Mode of Teaching Field Exercises and Evolutions in Military Tactics.*—Patent dated December 16, 1862.—This invention consists in the employment of rectangular blocks representing military figures or companies in line, and detached figures representing officers and privates, whereby a person may practice all the movements of the privates and officers both in battalion and company drill.

Claim.—The employment or use of the military figures or pieces representing privates and officers pertaining to a battalion or regiment, for the purpose herein specified.

No. 37,161.—WILLIAM B. EVANS, of Holderness, N. H.—*Improvement in Circular Knitting Machines.*—Patent dated December 16, 1862.—The object of this invention is to provide for the easy insertion and removal of the needles of a circular knitting machine, and to this end it consists mainly in a peculiarly constructed grooved conical needle plate, and a needle operating ring working in combination with the said needle plate.

Claim.—First, the combination of the needle plate A, having its face composed of two conical surfaces *b c*, and cylindrical surface *d*, and needle grooves *e e*, opening into the said cylindrical surface, and the two rings B C, having between them an open space *s s* opposite to the openings of the grooves in said cylindrical surface, substantially as and for the purpose herein specified.

Second, the plate L, applied in combination with the said needle plate and the ring B, substantially as and for the purpose herein specified.

Third, the inclined surfaces *g′ g′* provided on the ring C, substantially as and for the purpose herein specified.

No. 37,162.—GEORGE W. FOSDICK and JOHN CRAWFORD, of Dowagiac, Michigan.—*Improved Machine for Threshing and Hulling Clover-seed.*—Patent dated December 16, 1862.—The novelty of this invention consists in the arrangement of parts named in the

claim and shown in the engraving, by means of which clover-seed may be threshed from

Second, the arrangement and combination of the compartments *f g h* in the extractor B,

claim and shown in the engraving, by means of which clover-seed may be threshed from the straw, and the latter separated from the heads, and the seed also separated from the hulls.

Claim.—The arrangement of the threshing cylinder D, concave C, picker R, apron E, screen F, and pendants *f*, with the carrier G, in the manner herein shown and described.

Also, the combination of the parts above mentioned, when arranged in the manner stated, with the apron H, hulling cylinder I, shoe L, fan P, and elevator N, as herein shown and described.

Also, the arrangement of the apron H and boards *m* K with the concave J, cylinder I, and shoe L, in the manner herein shown and described.

No. 37,163.—JAMES M. FRENCH, of East Cambridge, Mass.—*Improvement in Iron Bedsteads.*—Patent dated December 16, 1862.—This bedstead is constructed with separate head and foot frames, and so that each of them shall have two mortises for the reception of tenons projecting from the two rails. Each of the rails is also provided, at the side of each of the tenons, with an auxiliary overlapping barrier, which, when the rail is inserted in the head and foot frames, overlaps the inner surface of the part in which the mortise is formed, and abuts against the inner side of the adjacent cross-rail of the posts of the frame.

Claim.—The improved bedstead as made not only with its angle iron rails B B and head and foot frames connected by tenons and mortises, but with each of the said rails furnished with bearers *e e*, constructed and arranged with respect to the tenons and mortises, and the lower bars of the head and foot frames, in manner and so as to operate therewith, substantially as specified.

No. 37,164.—WM. W. GINGRICH and C. S. COATES, of Mexico, Pa.—*Improvement in Mail-bag Locks.*—Patent dated December 16, 1862.—This lock is composed of two jaws, which are provided with plates and catches, in connexion with springs, so arranged that the mouth of the bag may be locked at several points at one time.

Claim.—The arrangement of the jaws A B, the plates E D, and the springs *s*, *m*, *i*, and *e*, the several parts being constructed and used for locking the mouth of the bag at several points at one time, as herein fully set forth.

No. 37,165.—SAMUEL P. GARY, of Oshkosk, Wis.—*Improvement in Gearing for Machinery.*—Patent dated December 16, 1862.—Supported in bearings upon a proper frame is a shaft D, having a universal joint at its inner end which will allow an inclination of the shaft at that point to a limited extent in any direction; and upon this shaft, beyond the universal joint, is secured a bevel wheel C, which is provided with teeth that gear with an internal bevel wheel B. In the centre of the wheel B is a hole, through which the shaft D freely passes. In a line with the shaft D is a shaft E, enlarged at its inner end, and provided with a hole to receive a pin projecting from the centre of the wheel C, at right-angles to its rear side, thus forming a crank upon the end of the shaft E.

Claim.—The combination of the stationary wheel B with the revolving wheel C, the joint G, and the crank H, for the purpose of transmitting rotary motion from the shaft D to the shaft E, or the reverse, substantially as herein set forth and described.

No. 37,166.—H. I. HEATON, of Peoria, Ill.—*Improved Cultivator.*—Patent dated December 16, 1862.—This invention consists in the arrangement of two sliding bars in connexion with the tongue and a lever, so that by means of the latter the said bars can both be moved in the same direction, and also the rear end of the draught-pole. At the rear part of the machine are the frames J J, to which the ploughs are attached, the said frame being connected at one end by means of chains to a shaft provided with a lever, by moving which latter the ploughs can be raised from the ground more or less, when desirable.

Claim.—The arrangement of the sliding bars C C', draught-pole D, bar E, and lever F, in connexion with the frames J J, having the ploughs P attached, all arranged as and for the purpose herein set forth.

No. 37,167.—P. L. HOWLETT, of Springfield, Ill.—*Improved Apparatus for Distilling Alcohol, &c.*—Patent dated December 16, 1862.—This invention consists in the arrangement of an extractor with one or more heating tubes, in combination with the ordinary still and doubler in such a manner that the steam emanating from the still, in passing through the tube or tubes of said extractor, is capable of heating and vaporizing the first wine, which, on leaving the doubler, is returned to the extractor by dry heat and without imparting to it any more water than it already contains, and thus the first wine is converted into alcohol without requiring any further distillation or additional expenditure of fuel. A cylindrical vessel having three compartments and provided with heating tubes is combined with a still, a doubler, two condensing coils, two reservoirs and a pump, in such a manner that the first wine can be readily returned to the middle compartment of the cylindrical vessel or extractor when it is vaporized by the action of the steam passing through the heating tubes, and converted into alcohol without any additional fuel or steam.

Claim.—First, the arrangement of one or more heating tubes *i* in the extractor B, in combination with the still A and doubler C, constructed and operating substantially as and for the purpose specified.

Second, the arrangement and combination of the compartments *f g h* in the extractor B, pipes *a* and *b*, heating tubes *i*, still A, doubler C, worms *c* and *m*, troughs D and F, and pump E, all constructed and operating as and for the purposes shown and described.

No. 37,168.—DANIEL HUNSICKER, of Laurelton, Pa.—*Improvement in Water Motors.*—Patent dated December 16, 1862.—This invention consists of an endless chain, provided with hinged floats and working over a rotating block, which is caused to turn as the floats are propelled by the water, the endless chain being provided with guide rollers, working between guide pieces, to keep the endless chain in a proper position while it is propelled by the water.

Claim.—The endless chain provided with hinged floats and arranged to work over a rotating block, substantially as described.

Also, in combination with the endless chain and floats, the guide rollers M M, and the guide pieces N and P P, for the purposes set forth.

No. 37,169.—BENJAMIN IRVING, of New York, N. Y.—*Improvement in the Manufacture of Skates.*—Patent dated December 16, 1862.—This invention is explained by the claim.

Claim.—As a new article of manufacture an improved skate, the runner or shoe of which is made of a plate of steel, with a narrow groove near each edge, when the body or frame of the skate is made of iron or some other softer metal or material, and when said frame is adapted equally to either foot as herein described

No. 37,170.—JEREMIAH KEITH, of New Bedford, Mass.—*Improved Machine for Punching and Eyeleting Shoes.*—Patent dated December 16, 1862.—This machine is composed of a vibrating hopper or magazine supported upon an inclined platform which is pivoted to the sides of the box so as to admit of a vertical tilting movement. The said magazine is provided with a series of discharge passages opening into the upper end of an inclined chute. Attached to a standard is the eyelet retainer E, consisting of a flexible spring so arranged as to retain the lower eyelets in a proper position to be seized by the carrier. To the upper end of a vertical slide bar is a jointed bifurcated bar provided with a block which carries a punch L, on one of its ends, while its opposite end is provided with an upsetter formed of a cylindrical piece of metal having a pin projecting from its end, which pin, when brought down, enters the eye of the eyelet, a flat surface or shoulder serving to compress the eyelet upon its top surface. The machine is designed to punch the holes for the eyelets, and also to introduce and properly fasten the eyelets in a shoe or other article.

Claim.—An improved punching and eyeleting machine, the same consisting of the vibrating hopper or eyelet magazine C, the inclined director D, the eyelet retainer E, the rotary punch L, and upsetter L^2, the rotary punch bed *t*, and the eyelet separator and carrier *u*, the whole being constructed and made to operate substantially as set forth.

Also, the combination of the rotary punch L and upsetter L^2, with the rotary punch bed *t*, and the eyelet separator *u*, the same being arranged substantially as set forth.

Also, the combination of the magazine C, the conductor D, the retainer E, the revolvable eyelet separator and carrier *u*, and the upsetter L^2, the same being arranged and made to operate as set forth.

No. 37,171.—DANIEL KELLY, of Grand Rapids, Mich.—*Improved Device to be Attached to Muskets and Rifles for Tearing Cartridges.*—Patent dated December 16, 1862.—This device is composed of a metal ring or band, fitted tightly to the band of the gun near the muzzle, and provided with two horns, between which is a tooth, made in the same piece and projecting radially from it, the horns being at such a distance apart as to receive between them the fold of the paper which closes the cartridge.

Claim.—A cartridge-tearer composed of a ring or band with two horns *a a*, and tooth *c*, between the horns; said horns, tooth, and ring being all made in one piece and operating as herein set forth.

No. 37,172.—ISAAC LAMPLUGH, of Peoria, Ill.—*Improvement in Claw Bars.*—Patent dated December 16, 1862.—In the heel of the spike drawer is formed a recess to receive the head of a spike which is to be withdrawn, and in connexion with the recess is a vertical slot of sufficient width to receive the spike. In the act of withdrawing the spike, the fulcrum point of the arm is gradually moved forward so as to preserve the vertical position of the spike, thus preventing it from being bent.

Clnim.—The shifting fulcrum arm E, having an auxiliary bearing point *d*, in combination with the slot *b*, recess *a*, and the heel H, in the manner and for the purpose substantially as described.

No. 37,173.—EDWARD LINDNER, of New York, N. Y.—*Improvement in Air Guns.*—Patent dated December 16, 1862.—The nature of this invention will be understood from the claim and engraving.

Claim.—First, the formation of a lever constructed conformably in shape with the handle or stock of the gun or pistol, and so arranging and combining with it a piston and spring as to compress the latter by direct action on the piston rod, substantially as herein shown and described.

Second, the combination with a cylinder in which the air is compressed as described, of a piston with an automatically expanding packing as herein shown and set forth.

Third, the formation of an annular recess at the joint of the barrel with the breech in combination with a projecting India-rubber ring, whereby an air-tight joint is effected substantially as herein described.

Fourth, providing the cylinder containing the air-compressing piston with an aperture and slide-valve, or any equivalent means of adjusting the size of the said aperture, to regulate the size of the vent or the force of compression as herein described.

Fifth, the construction of the projectiles with an elastic and expanding back or bottom, whereby in air pistols or guns rifled barrels may be used to insure accuracy of aim as herein described.

No. 37,174.—WILLIAM MCCONNELL, of Philadelphia, Pa.—*Improved Ash Sifter.*—Patent dated December 16, 1862.—This device is composed of a hopper provided with a hinged cover and sieve, and hung near its lower end to a bracket secured to a wall, so as to admit of the hopper being freely vibrated. At the lower end of the hopper is attached a curtain of any suitable fabric so as to enclose the upper part of the ashes receptacle.

Claim.—First, a hopper A of any suitable form, provided with the lid *a*, or its equivalent, and sieve *b*, when the whole is so connected to a permanent bracket B, or its equivalent, as to be readily vibrated.

Second, in combination with the vibrating hopper, a curtain D of such shape and dimensions as to enclose the mouth of the receptacle for the ashes without interfering with the free movement of the hopper.

No. 37,175.—MARCUS P. NORTON, of Troy, N. Y.—*Improved Post-marking and Cancelling Stamps.*—Patent dated December 16, 1862.—This invention is explained by the claim.

Claim.—First, the cancelling device C, having on the face or lower surface thereof knives or cutters, and a guard or guards in combination with each other, by means of which the postage stamp is cancelled by the said cutter, and at the same time prevent any injury to the letter or any contents therein from the said knives or cutters by means of the said guard or guards, substantially as herein described and set forth.

Second, the combination of the cancelling-stamp C and the post-marking or rating-stamp D with the cross-piece B, substantially as and for the purpose herein described and set forth.

No. 37,176.—NELSON PECK, of Jay, N. Y.—*Improved Earth Scraper.*—Patent dated December 16, 1862.—This invention is designed as an improvement upon a machine for which a patent was granted to the said Peck, on January 3, 1860, and it consists in an arrangement of levers with the draught-pole and axle, by which the scraper is lowered and raised when required to perform its work and discharge the load.

Claim.—The combination of the scraper C, draught-pole D, axle A, and levers E E E, all arranged to operate substantially as and for the purpose herein set forth.

No. 37,177.—BENJAMIN L. PHILLIPS, of Providence, R. I.—*Improvement in Pantographic Engraving Machines.*—Patent dated December 16, 1862.—This invention relates to improvements in pantographic engraving machines which are more particularly used for engraving or tracing designs on cylinders for the use of printers on calico and other fabrics. The invention does not admit of a brief description.

Claim.—First, the method of communicating the motions of the tracer-point *a* and carriage E to the cylinder C, substantially as described.

Second, supporting the bars T on fixed inclined ways S, substantially as and for the purpose set forth.

Third, a compensating connexion between the weighted arm *g*2 and graver arm *c*2, substantially as described.

Fourth, pivoting the weighted arm *g*2 at a different point from that at which the graver arm *c*2 is pivoted, that they may be moved separately, substantially as described.

Fifth, the inclined groove 8 for guiding the graver carriage, substantially as described.

Sixth, inclining the bar F, for the purpose specified.

Seventh, changing the relative speed of the carriages E and G by connecting them with pulleys of a different size, substantially in the manner and for the purpose set forth.

Eighth, the automatic feed connected with the pulley E2 for regulating the spaces between the grounding lines, substantially as described.

Ninth, the employment of screw-scored pulleys, such as W E2 C2, on a pantographic engraving machine, for the purpose specified.

Tenth, the employment of templets cut out to the form of any figure which is to be repeated, in combination with a supplementary tracing-point *a*3, to be used substantially as set forth.

Eleventh, reversing the motions of the graver-carriage by clamping the wire *x* to the carriage G, either at *a*1 or *a*2.

No. 37,178.—WILLIAM PIERPONT, of Salem, N. J.—*Improvement in Horse-Powers.*—Patent dated December 16, 1862.—The rear ends of the draught-levers are fitted in sockets

cast upon the upper surface of the main wheel. The levers are connected together by means of braces fastened at their front ends by loose bolts, and at their rear ends by hinges or pivots, so that as the machine is in operation, the levers can rise and fall independently of each other and the main wheel.

Claim.—First, the combination of the socket-pieces *a* and lever supporting-piece *b*, with the main wheel A, substantially as and for the purpose set forth.

Second, the combination of the draught-levers B with the braces C and main wheel A, substantially as set forth.

No. 37,179.—CHARLES F. POLLARD, of Lynn, Mass.—*Improvement in Head-Blocks for Lasts.*—Patent dated December 16, 1862.—Upon an upright standard is a circular plate B having an elongated semicircular flange C with a notched edge crossing it through its centre, at right angles with its upper surface. Through the standard is passed a wedge D, upon the front end of which is a spiral spring which serves to bring the wedge into the notches of the flange, and retain it in position. Fitted upon the plate B and revolving upon the same is a plate E, in the centre of which is fitted a washer F having a bevelled edge. In a groove formed by bars on the top of the plate E is fitted to slide a movable inclined plane, in which also slides the toe-rest K provided with a gain through its lower end to allow it to pass over a notched bar and receive a catch which is hung by a pin *r* and drops into the notched bar, thus holding the toe-piece in the required position.

Claim.—First, the plates B E F, notched flange C, with the wedge D, spiral spring *d* and pin *b*, when combined and arranged to operate in the manner and for the purpose specified.

Second, the sliding toe-rest K, pivoted catch *p*, in combination with the inclined plane I, notched bar or rack *m*, curved spring *n*, and pivot lever H, when arranged to operate in the manner and for the purpose specified.

No. 37,180.—WILLIAM SELLERS, of Philadelphia, Pa.—*Improvement in Belt-Shifting Device.*—Patent dated December 16, 1862.—This invention consists in arranging the segments of an internal and external wheel so as to work about a common centre, and to have one tooth on each gear into a corresponding space on each belt-shifter, in such a manner that a full movement of the segments in either direction will operate the belt-shifters, but not at the same time, one being arranged to complete its movement before the other commences, and upon reversing the motion of the segments the movement of the shifters will take place as before, but in the reverse order.

Claim.—The use of an internal and external segment-wheel arranged substantially as and for the purpose specified.

No. 37,181.—THOMAS SMITH, JR., of Boston, Mass.—*Improvement in the Manufacture of Elastic Cups, Dippers, &c.*—Patent dated December 16, 1862.—This invention consists in providing on the surface of the vessel a groove or channel formed by two raised parallel flanges between which, owing to the flexibility or elasticity of the vessel, the supporting band is slipped and inserted, where it will be firmly held.

Claim.—The improvement in the manufacture of elastic or semi-elastic vessels, which consists in so forming them as to cause them to engage and be firmly held in a band or bands of metal or other rigid material, substantially as described.

No. 37,182.—ISAAC SOLOMON, of Baltimore, Md.—*Improvement in Apparatus for Steaming Oysters in the Shell.*—Patent dated December 16, 1862.—This apparatus consists of a large steam-tight receiver made of boiler-iron and provided with steam-tight doors; near the bottom of the receiver are placed valves operated by projecting handles. A steam-pipe conducts the steam from the boiler of the receiver, and the latter is also provided with shelves formed of iron bars and of perforated iron tubing connected with steam-pipes.

Claim.—First, the combination and arrangement in an apparatus for steaming oysters of the receiver *a' a' a' a'*, constructed substantially as described, with the steam supply-pipes, valve, and perforated shelf-tubes constructed and arranged for conjoint operation in the manner set forth.

Second, in an oyster-steaming apparatus, the combination of the steam-tight doors A, constructed and operating substantially as set forth, with the air-valves F, and steam-escape valve, arranged and operating as and for the purpose described.

Third, the employment in an oyster-steaming apparatus of a receiver at the bottom, for the reception and preservation of the liquor from the oysters to be drawn off for use as described.

No. 37,183.—WILLIAM S. THOMPSON, of Rochester, N. Y.—*Improvement in Spring Fastening for Lamp Chimneys.*—Patent dated December 16, 1862.—This invention is explained by the claim and engraving.

Claim.—Securing the chimney by means of the flexible, elastic wires D D on the opposite sides, suitably connected together, and having the portions *c c* resting respectively in the slots *a a* of the flange of the lamp top, in such a manner as to furnish an extended, continuous bearing on the base of the chimney to hold it centrally in place and allow it to expand freely and to adapt it to different sized chimneys, the whole arranged, combined and operating substantially as herein set forth.

No. 37,184.—MORRIS TODD, of Quasqueton, Iowa.—*Improvement in Seeding Machines.*—Patent dated December 16, 1862.—This invention consists in the arrangement of a vertically adjustable hopper box suspended by means of straps or pendants from the axle of the hind wheels of an ordinary wagon, and provided with a hinged adjustable bottom in combination with a gauge screw, in such a manner that the said hopper can be readily adjusted to suit wagons of different heights, and the bottom can be set to sow different kinds of seeds, or different quantities to the acre.

Claim.—The arrangement of the vertically adjustable hopper-box A suspended by means of straps or pendants B from the hind axle E of an ordinary wagon in combination with the gauging screen *c* and hinged bottom G, all constructed and operating in the manner and for the purpose shown and described.

No. 37,185.—THOMAS VARNEY, of San Francisco, Cal.—*Improvement in Amalgamators for Gold and Silver.*—Patent dated December 16, 1862.—This invention consists in the employment of a rotary and stationary muller placed within a suitable pan or tub provided with a cover, and so arranged that when in operation the ore will pass in a current outward from the centre and between the mullers to the circumference of the same, and thence inward over the upper and rotating muller to the centre of the same, and down through said muller between it and the lower stationary one to be again thrown to the periphery of the mullers, thus causing all the particles to be brought in contact with the quicksilver in the pan or with the amalgamated plates attached to the muller or mullers.

Within the pan are placed curved or spiral scrapers arranged relatively with the upper surface of the rotating muller so as to insure the passage of all heavy substances in the pulp, thereby preventing the same from lodging on the rotary muller.

Claim.—First, the employment or use of a rotating muller F provided with central openings *g* and arranged within a pan or tub A, with a stationary muller G, or an equivalent bed-plate, substantially as shown, to insure a current or circulation of the pulp within the pan or tub and between the mullers, as and for the purpose set forth.

Second, a covered or close pan or tub A, composed of two parts *a b*, connected together, when said pan or tub is used for an ore amalgamating device as specified.

Third, the curved plates or scrapers I arranged to operate in connexion with the rotary muller F, for the purpose herein set forth.

No. 37,186.—HENRY WALTERS, of Tamaqua, Pa.—*Improvement in Steam-Engines.*—Patent dated December 16, 1862.—This invention will be understood by reference to the claim and engraving..

Claim.—In cylinders of steam-engines of otherwise ordinary or suitable construction, valves at either end of said cylinder and balanced by a working beam so as to automatically open and close the water passages by the alternate action of steam on the piston as described, when the fulcrum of said beam is adjustable, whereby the lift of the valves may be regulated at pleasure, substantially as herein shown and set forth.

No. 37,187.—DAVID WARREN, of Gettysburg, Pa.—*Improvement in Harvesters.*—Patent dated December 16, 1862.—This invention consists in interposing two strong steel springs between the dead points of the crank, the said springs extending over to the knife-bar, and acting upon a bolt which passes through the knife-bar near its end, so that when the knife-bar is in motion, the bolt plays between the springs, striking each alternately before the pitman reaches the dead points of the crank, and thus enabling the wrist of the pitman to pass these points without a jar.

Claim.—The springs A1 and A2, the bolt *c*, and the guide B, the whole arranged in the manner and for the purpose herein specified.

No. 37,188.—THOMAS J. WELLS, of New York, N. Y.—*Improved Self-feeding Sawing Machine.*—Patent dated December 16, 1862.—In this machine the circular saw is arranged in such a relation to the table or platform on which the material is sawed as to enable each tooth to perform the double function of feeding and gauging the material to the action of the next tooth in succession by the act of the tooth cutting through said material at such an angle as will draw it forward the required distance for the back cut of each successive tooth, for the purpose of avoiding the necessity of forcing the material forward by hand or other means.

Claim.—The combination of the saw A with the table E and guide F, when arranged in relation to each other, and operating in the manner and for the purpose described.

No. 37,189.—JAMES V. WESTLAKE, of St. Louis.—*Improved Mode of Punching Countersunk Holes.*—Patent dated December 16, 1862.—This invention consists in extending the diameter of the hole in the die, so that the countersunk holes required for the taper heads of bolts, and like fastenings, can be made by a punching instead of a boring operation.

Claim.—The punching of countersunk holes in metal so that the same shall be applicable to the practical use of receiving the taper or inverted cone-shaped heads of bolts and other like fastenings, substantially as described.

No. 37,190.—JOSEPH WHARTON, of Philadelphia, Pa.—*Improvement in Furnaces for the Manufacture of Oxide of Zinc.*—Patent dated December 16, 1862.—Extending the whole length of the furnace is a division wall, thus forming two distinct portions or furnaces. This division wall is surmounted by a trough of cast-iron sunk into its top and kept full of water by a flow from an upright trunk E at one end. The water is caused to fall in a shower in the upright trunk through which the vapors and zinc oxide pass, which serves to remove any remaining impurities in the said vapors, &c.

Claim.—First, the trough T and trunk E for introducing water into the furnace for the purpose of cleaning the zinc oxide while in the furnace and at the instant of its production, substantially as above described.

Second, the arrangement of the furnace A and B, the division wall *c*, and the reverberatory arch or cover, substantially as shown.

No. 37,191.—JOHN WIARDA, of Hoboken, N. J.—*Improvement in Rocking Sled Propeller.*—Patent dated December 16, 1862.—This invention consists in the arrangement of one or more pointed feet hinged to the under surface of the rocking seat of a sled, suspended from a pivot or pivots in such a manner that by imparting to said seat an oscillating or rocking motion, the feet are alternately depressed on the ground in an inclined direction in such a manner as to propel the sled. In combination with the hinged pointed feet and rocking seat are two working beams arranged in connexion with a foot-board, so that a person operating the seat can exert a direct power in propelling the sled by pressing his feet on the foot-board and his back against the back of the seat, in passing over rough or uneven surfaces.

Claim.—First, the arrangement of one or more pointed feet *d d*, in combination with the rocking seat A of a sled, constructed and operating as and for the purpose shown and described.

Second, the arrangement of working beams F, in combination with the hinged pointed feet *e e*, and with the rocking seat A, and foot-board *b*, of a sled constructed and operating substantially as and for the purpose specified.

No. 37,192.—HENRY A. ALDEN, of Fishkill, N. Y., assignor to the NEW YORK RUBBER COMPANY.—*Improvement in the Manufacture of Hose and Flexible Tubes.*—Patent dated December 16, 1862.—This invention is mainly described by the claim. The cylindrical form of the hose is preserved by means of the pressure to which the liquid in the tub is exposed, when the tube is suspended, the interstices in the fabric being filled or packed with the compound.

Claim.—The herein-described process or method of water-proofing hose by internal application under pressure of such liquid or semi-liquid India-rubber, gutta-percha, or other cementing substance or compound, as that, by subsequent exposure to air or heat, or by being otherwise treated, shall form a dry flexible coating impervious to water, and when so water-proofed, the mode described of preserving the cylindrical form for the hose.

No. 37,193.—CHARLES R. ALSOP, of Middletown, Conn., assignor to JOSEPH W. ALSOP, of New York, N. Y.—*Improvement in Rifled Muzzle for Smooth-bored Guns.*—Patent dated December 16, 1862.—This invention consists in applying to the muzzle of an ordinary smooth-bore gun a rifled muzzle, or an additional length or section of barrel, grooved or rifled in the usual manner for the purpose of imparting rotary motion to the ball or projectile as it leaves the gun.

Claim.—A rifled muzzle in combination with a smooth-bore gun barrel, substantially in the manner and for the purpose set forth.

No. 37,194.—JAMES EMERSON, of Manchester, N. H., assignor to WILLIAM P. HUNT, of Dorchester, Mass.—*Improved Ship's Windlass.*—Patent dated December 16, 1862.—In this apparatus the two grabs are placed upon one vertical shaft, the lower grab being larger than the upper one and provided with an internal gear, the two being caused to revolve in reverse directions by means of a system of gears and a clutch, and so arranged as to effect the heaving in of two chains of a ship at the same time. The shaft Q is made in two parts, the upper part serving for the capstan spindle, and the lower end passes into a clutch, which is raised and lowered by a cam, so that the lower part may be made to move at double the speed of the upper part, for light work, when necessary.

Claim.—First, placing the two grabs E E on one vertical shaft, and causing them to revolve in reverse directions for the purpose of heaving in the two chains of a ship at the same time, substantially as described.

Second, the arrangement of the small gears I J K L, and the clutch N, in connexion with the two chain grabs on the vertical shaft P, for the purpose described, when arranged substantially as described.

Third, the separation of the shaft Q, thus making it in two pieces in order to allow nearly all of the working parts to be secured to the lower piece, for the purpose named and substantially as described.

No. 37,195.—DANIEL FITZGERALD, of New York, N. Y., assignor to Himself and CHARLES

No. 37,195.—DANIEL FITZGERALD, of New York, N. Y., assignor to Himself and CHARLES B. TATHAM, of Brooklyn, N. Y.—*Improvement in Hydraulic Cylinders.*—Patent dated December 16, 1862.—This invention consists in the employment of a series of cylinders fitted and shrunk one over the other, and with hoops similarly fitted and shrunk, and filling the interstices between the cylinders with water secured by a proper safety valve.

Claim.—Consolidating and combining the strength of concentric cylinders by means of water or other liquid, hot or cold, filling the interstices in the manner substantially as above described.

No. 37,196.—DANIEL KELLY, of Grand Rapids, Mich., assignor to Himself and JACOB A. SMITH, of the same place.—*Improved Method of Securing Bits in Stocks.*—Patent dated December 16, 1862.—This device is composed of a square stock having a small recess formed in one corner of its upper end, in which recess is pivoted a wedge, key or notched button, which secures the bit in the stock. One of the edges of the notch is bevelled so as to form a key, for the purpose of drawing the bit-head tightly into the socket.

Claim.—The arrangement of the notched wedge-faced pivoted button *a*, with the tool stock A and tool B, in the manner and for the purpose herein shown and described.

No. 37,197.—DAVID E. HALL, of Brooklyn, N. Y., assignor to Himself, VASCONCELLA HOUGHTON, WILLIAM A. NICHOLS and THEO. C. SEARS.—*Improvement in Coal Oil Lamps.*—Patent dated December 16, 1862.—This invention consists in the employment of a porous mineral wick tip combined with a stationary wick of fibrous material. The wick tube is guided by and fitted to slide vertically in the shell of the burner, and is raised or lowered by a ratchet wheel so that its upper end is slightly below a short deflecting tube, which latter causes the air to pass through openings in the sides and from the interior of the shell to the base of the flame.

Claim.—The fibrous mineral tip *i*, prepared substantially as specified in combination with the wick *f*, of fibrous material, as set forth.

Also, the adjustable wick tube *d*, in combination with the deflecting tube *g*, for the purposes and as specified.

No. 37,198.—WILLIAM QUANN, of Philadelphia, Pa., assignor to Himself, WILLIAM N. TAYLOR, A. R. WETMORE and CHARLES C. LATHROP, of the same place.—*Improvement in Smelting Ores of Gold, Silver, Copper, &c.*—Patent dated December 16, 1862.—The nature and object of this invention are explained by the claim.

Claim.—In the process of smelting gold, silver, copper, nickel, and all other ores except iron, and for purifying the metal obtained therefrom, the use of wood ashes, chemical charcoal, carbonate of ammonia, oil or other resinous matter, salt, bone dust, sulphur and sand, substantially as described.

No. 37,199.—GEORGE H. REAY, of Hudson, N. J., assignor through mesne assignments to JOHN Q. PREBLE, of New York, N. Y.—*Counting Attachment for Envelope Machines.*—Patent dated December 16, 1862.—The object of this invention is to place the envelopes as they are discharged from the machine in such order that they can readily, and without loss of time, be made up in packs, each containing twenty-five or other desired number.

Claim.—So disposing the envelopes as the same are discharged from an envelope machine that one or more envelopes are pushed out beyond the edge of the regular pile at intervals of twenty-four, or any other desired number of envelopes, substantially as and for the purpose herein shown and described.

No. 37,200.—SAMUEL R. RUSSELL, of Middletown, Ohio, assignor to Himself and BENJAMIN F. TEFFT, of Bangor, Maine.—*Improvement in Concussion Fuze for Shells.*—Patent dated December 16, 1862.—This invention consists in the employment of a perforated tin tube, containing a plunger and fuze, fitted in the base of a projectile, and so arranged that the fuze shall be lighted by and at the moment of the discharge of the gun, and carried forward by and at the instant of the impact with the shell with a resisting object, so as to bring the ignited fuze in contact with the powder within the shell at the moment of the said impact.

Claim.—The combination with a projectile of the perforated tube B, the plunger D, plug H, and fuze C, arranged and operated in the manner and for the purposes substantially as herein described.

No. 37,201.—EUGENE LEMERCIER, of Paris, France, administrator of the estate of LOUIS JULES SELLIER, assignor to AMASA B. HOWE, of New York, N. Y.—*Improved Machine for Sewing on the Soles and Heels of Boots and Shoes.*—Patent dated December 16, 1862.—This invention relates to machines employed for uniting together different layers of material of which the soles and heels of shoes and boots are composed, and also the ends and seams of straps or belts, hose-pipe and similiar articles, by means of a screw which is cut in a continuous manner by the said machine and immediately, whilst being cut, is screwed or entered into the material to be united and riveted thereon, thus firmly uniting the different layers of material.

Claim.—First, constructing and mounting the machine in such a manner that any required pressure may be produced on the shoe at the will of the operator while the screw is entering the sole, and instantly stopped after the point of the screw touches the iron last, substantially as and for the purpose described.

Second, in combination with a machine for cutting and inserting screws in boots and shoes, an elevating and depressing apparatus, as shown at F G H, Fig. 1, by means of which the machine can be elevated or depressed as required, as in passing from the heel to the shank of the shoe, which apparatus also admits of placing the machine in such a position that the screw may enter the sole at any required longitudinal angle, substantially as desribed.

Third, connecting the machine to the depressing lever D, as shown at I″ I″ I‴ I I′, for the purpose of inclining the machine to the right or left, so that the screw may be entered at any required lateral inclination.

Fourth, in combination, the elevating and depressing apparatus F G H, with the connecting joint I″ I″ I‴ I I′, for the purposes set forth in the specification.

Fifth, in combination with the screw R and spring V, the movable step or bisected nut *v v′*, for feeding in a fresh supply of wire and acting in the manner described and for the purposes set forth.

Sixth, the nose with recesses *h h′*, Fig. 3, acting as a gauge for insuring a uniform distance between the screws.

Seventh, in combination with a machine that makes and supplies screws from a continuous wire, the cutter *d* actuated by a lever N, rack *e*, pinion O, and a spring *f*, said cutter severing the screw near the sole as soon as screwed home.

Eighth, the triangular section of the cutter *d*, shown at Fig. 2 2*a* and 3, leaving the lower ends of the screw in the shape of an inverted V, for the purpose of spreading and riveting on the last.

No. 37,202.—A. B. SHAW, of Worcester, Mass., assignor to himself and N. H. SHAW, of same place.—*Improvement in Sewing Machines.*—Patent dated December 16, 1862.—The feed lever, carrying the jointed feeding and pressing foot, is fitted into a vertical slot in the stand, and is made with a yoke for the reception of a cam. The downward pressure upon the said lever is produced by a spring *u v*, made in two leaves, of which the upper is secured to the top of the stand, and the lever is attached to the upper one by a rivet, so as to permit an independent upward and downward movement. Between the spring and cam *d* is arranged a pin *x*, which is fitted to slide vertically in a guide in the standard, and a hole is provided in the lower leaf of the spring for the said pin to pass freely through.

Claim.—The combination of the lifting cam and pin *x* with the lever H and springs *u v*, in the manner and for the pupose shown and described.

No. 37,203.—JOSEPH SHORT, of Boston, Mass, assignor to ALBIE H. SHORT, of Salem, Mass.—*Improvement in Knapsacks.*—Patent dated December 16, 1862.—This invention is designed as an improvement upon the knapsack for which a patent was granted to the said Short, January 28, 1862, and it consists in an arrangement of straps in connexion with the neck band or yoke and steady pins at the bottom of the knapsack to prevent it from swaying sidewise in quick movements of the soldier.

Claim.—First, the suspension strap or straps *c′*, in combination with the connecting strap or straps *i*, and yoke or neck-strap B, in the manner and for the purpose substantially as set forth.

Second, the steady pins *e e*, in combination with the knapsack A, substantially in the manner and for the purpose set forth.

No. 37,204.—ISAAC SMITH, of Albany, N. Y., assignor to S. H. RANSOM & Co., of same place.—*Improvement in Grates for Stoves.*—Patent dated December 16, 1862.—This invention is designed as an improvement upon a grate for which a patent was granted to the said Smith on November 27, 1860, and it consists in combining with such grate a device by which the function of dumping the ashes can be performed in addition to the sifting operation.

Claim.—Combining with the grate suspended by hinges, as herein refered to, the dumping arrangement, substantially as described.

No. 37,205.—E. VALENTINE and M. T. RIDOUT, of Milwaukie, Wis., assignors to Themselves and WILLIAM BECK, of the same place.—*Improvement in Bending Metallic Spouts.*—Patent dated December 16, 1862.—This invention consists in the use of an elastic laminated core or mandrel in connexion with a swaging apparatus, the said mandrel being composed of a series of thin elastic metallic plates placed on either side of a core of India-rubber or other elastic yielding material. The mandrel is joined to a horizontal lever and rests upon the upper surface of a forming and shaping block G, the further end of which is curved in the form to be imparted to the metallic spout. Directly over the shaping-block is placed a grooved swaging-wheel T, in the rear of which is a retaining hook secured to an elastic band *p*, which latter is carried forward over and under the swaging-wheel and fastened in the rear of the actuating lever. The upper surface of the shaping-block is covered with a layer of India-rubber forming an elastic cushion *r*.

Claim.—First, the use of an elastic core or mandrel in the manufacture of curved metallic pipes or spouts, substantially in the manner hereinbefore set forth.

Second, the use of a series of thin elastic metallic plates in the construction of a core or mandrel for the inflection of metallic spouts, substantially in the manner herein set forth.

Third, when an elastic core or mandrel is used in the manufacture of curved metallic spouts, the use of a shaping-block G, a retaining hook S, and a lever-actuated swaging wheel T, or their equivalents, when combined and arranged substantially in the manner and for the purpose herein set forth.

Fourth, when a lever-actuated swaging-wheel T and shaping-block G are used in the inflection of metallic spouts, the use of an elastic projecting band *p* and elastic cushion *r*, or their equivalents, when combined and arranged substantially in the manner and for the purpose herein set forth.

No. 37,206.—SHERMAN JAQUA, of Paterson, N. J.—*Improvement in Machines for Rolling Tires for Locomotive Wheels.*—Patent dated December 16, 1862.—The nature and object of this invention are explained by the claim.

Claim.—First, the arrangement, as described, of the top and bottom rollers in an adjustable frame, which is so constructed and attached to the bed as to allow the axis of the said rollers to be brought into a radial line with tires of various sizes, while, at the same time, they are made capable of inward and outward radial adjustment, substantially as set forth.

Second, the arrangement of two bottom rollers, as herein described, in relation to the top roller, by which the tire is prevented from sagging away from the top roller, and a finishing flange roller allowed to be placed immediately under the top roller, as herein set forth.

Third, the arrangement of the bottom rollers for finishing the lower edge of the tire, in a different radial plane from that which is occupied by the driving rollers, by which they are prevented from interfering with the said driving rollers, and a more efficient and satisfactory arrangement of parts is made admissible.

No. 37,207.—THOMAS WELHAM, of Nemeha county, Nebraska.—*Improvement in Military Observatory.*—Patent dated December 16, 1862.—This invention consists of a movable signal tower mounted on wheels, and composed of a platform in which a sectional shaft is arranged to be raised and lowered, the said shaft being surmounted by a cylindrical look-out.

Claim.—The combination of an observatory, look-out or signal station, in such a manner that it can be elevated, when desired, to any required and practicable height by the addition of successive lengths or sections to the lower end of its supporting shaft, substantially in the manner described.

No. 37,208.—SAMUEL STRONG, of Washington, D. C.—*Improvement in Breech-loading Fire-arm.*—Patent dated December 16, 1862.—This invention is explained by the claim.

Claim.—First, mounting the hammer upon and securing it to the hinged gate, and notching the face of the hammer at such a point relative to the trigger that in the act of closing the gate to its seat in the breech, the trigger will enter the notch and raise the face of the hammer off the cartridge, as described.

Second, in dividing the handle of the gate by which it is operated, or securing to its lower surface a spring catch *x*, which takes into a notch formed in the breech, in the manner set forth.

Third, the combination and arrangement of the gate, hammer, trigger, and mainspring, independent and so constructed that unless the gate is fully closed the hammer cannot be raised to full cock nor the piece discharged in any other position.

No. 37,209.—JOHN ADT, of Waterbury, Conn.—*Improvement in Locks.*—Patent dated December 23, 1862.—In this lock the bolt is constructed with a groove or recess to receive the bit of the key and serves as a "gating" for the bit to act upon, so as to shove the bolt out from and into the lock case, thereby avoiding all lock appendages, such as "gatings," projections, levers, &c., commonly used for the bit of the key to act against.

Claim.—The catch C, when used in combination with the bolt B, and the double-pronged bit *q*, all arranged as herein set forth.

No. 37,210.—HIRAM BARBER, of Juneau, Wis.—*Improved Bed Bottom.*—Patent dated December 23, 1862.—The bed-bottom is formed of longitudinal slats resting upon a spiral spring at each end, which springs are suspended to a cross-bar fastened to the head and foot, the slats passing under the cross-bar and resting on the spring. To the bed-bottom is also attached an arrangement for raising and lowering the head of the bed, consisting of a false bottom of slats fastened to a cross slat upon the cross-bar to which the main bottom is suspended, the lower ends of the said slats being secured in place by a metallic sheath fastened to the main slat.

Claim.—The combination and arrangement of the springs A, cross-bars O, slats G and F, and sheath E, with or without the devices for raising and lowering the slats F, substantially as and for the purpose specified.

No. 37,211.—ELIAS U. BENEDICT, of Chicago, Ill.—*Improvement in Metallic and Wooden Roofs.*—Patent dated December 23, 1862.—This invention consists in a method of adapting metallic leak gutters and single tiers of boards together so as to cause the joints of the roof to be closed water-tight and allow the water to be conducted to the eaves of the roof. The metallic gutters and roofing-boards are tongued and grooved together so as to allow the boards to shrink or swell without disturbing the gutters, and the gutters may be withdrawn and replaced without the necessity of taking off the boards.

Claim.—The combination of gutters made of metal, and substantially as described, with the joints and enlarged grooves of the board roof, the gutters being capable of being withdrawn, and the boards capable of shrinking or swelling independent of the gutters, all substantially as and for the purposes set forth.

No. 37,212.—ALFRED BLISS, of New Rochelle, N. Y.—*Improvement in Lamp Insulators.*—Patent dated December 23, 1862.—This invention consists in partially or wholly lining the interior of the socket, which is fastened to the upper part of the lamp globe and into which the burner is screwed, with a ring or collar of gutta-percha or India-rubber so arranged as to interpose a non-conducting substance all around the open part of the reservoir, and between it and the heat generated from the flame.

Claim—An insulating collar of gutta-percha or India-rubber, constructed with an internal thread *b* to receive the burner A, and an external thread *a'* to screw into the socket B, substantially as herein shown and described, and adapted to entirely prevent contact between the metallic surfaces of the lamp-top and socket, as explained.

No. 37,213.—JAMES E. BOYLE, of Brooklyn, N. Y., assignor to GEORGE STEVENSON, of New York, N. Y.—*Improvement in Valves for Water Closets.*—Patent dated December 23, 1862.—This invention relates to an improvement in cocks and valves for supplying water to water-closet and other pans for which a patent was granted to the said Boyle January 3, 1860, and it consists in the employment of a hollow valve stem with its lateral induction and eduction water-ways in combination with an induction valve, sliding piston and cylinder, provided with a small aperture or leak to control the closing of the valve, and the diaphragm for closing the valve by the pressure of the water above.

Claim.—The hollow valve stem with its lateral induction and eduction water-ways, substantially as described, in combination with the induction valve, sliding piston and cylinder, provided with a small aperture or leak to control the closing of the valve, and the diaphragm, or the equivalent thereof, for closing the valve by the pressure of the water alone, substantially as and for the purpose specified.

No. 37,214.—JACOB BRINKERHOFF, of Auburn, N. Y.—*Improvement in Churns.*—Patent dated December 23, 1862.—The main shaft is provided with a series of blades grooved longitudinally on one side, and arranged in spiral lines upon the same. The said shaft is supported at its ends on the inner ends of short metal shafts, which are squared to fit sockets in the main shaft. Fitting over the end of one of the short shafts is a balance wheel, having a square hole passing through it with a cylindrical countersink, the former to fit over the outer square end of the short shaft, and the latter to fit over the outer end of a box or hollow stud shaft *c'*, upon which it revolves.

Claim.—First, the hollow stud shaft *c'*, short metal shaft *b'*, key *d'*, and fly or balance wheel D, when combined and arranged to operate in the manner and for the purpose specified.

Second, the series of longitudinally-grooved blades H, in combination with the horizontal shaft C, on which they are arranged in spiral lines to operate in the manner and for the purpose set forth.

No. 37,215.—JOHN S. BROOKS, of Rochester, N. Y.—*Improved Elevator Bucket.*—Patent dated December 23, 1862.—This invention consists in attaching to the front part of an elevator bucket of any of the ordinary forms, a plate of steel fitted to the part most exposed to wear by the friction of the grain. The back and ends of the bucket are formed of one piece of metal turned over at its upper part so as to enclose an iron band, which is riveted at its ends to the steel plate facing.

Claim.—The employment of a shield or facing of steel, or its equivalent in any hardened metal, to elevate buckets, as and for the purposes described.

Also, in combination with the above, the mode of putting the iron band around the back and ends while they are flat, and fastening it to the steel facing, as and for the purposes shown and described.

No. 37,216.—FRANCIS BUSH, of Boston, Mass.—*Improvement in Cartridge Boxes.*—Patent dated December 23, 1862.—This invention relates to the construction of the metallic box which contains the cartridges, and which is placed within the leathern box or case, and it consists in making the said box open at the top only, and providing it with one or more sliding boxes, which rest on the bottom of and within the main box when the same is filled, and which, when the cartridges have been used therefrom so as to render them difficult to be reached, may be raised and held at a convenient height for the removal of the remainder.

Claim.—First, the adjustable inner box or boxes B, in combination with the box or case A,

roller or bearer in proportion as the weaving of such cloth may progress, and instead of the

Claim.—First, the adjustable inner box or boxes B, in combination with the box or case A, in the manner and for the purpose specified.

Second, in combination with the boxes A and B, the employment of a stop, substantially as and for the purpose described.

No. 37,217.—RILEY W. CARPENTER, of Brooklyn, N. Y.—*Combination of Reed Instruments with the Piano-forte.*—Patent dated December 23, 1862.—This invention consists in the arrangement of the reed-board within one end of the case in an upright position, and the arrangement of the key-board to swing back into the case with the keys nearly close to the reed-board when it is not desired to play upon the reeds, so that each can be played upon separately or the one as an accompaniment to the other by a different player.

Claim.—First, the arrangement of the reed-board C and the key-board D, in combination with each other and with the extended portion B of the case A B, substantially as and for the purposes herein described.

Second, in combination with such arrangement of the reed-board and key-board within the case, the combination of the reeds and keys by means of jacks G G, applied substantially as herein specified, to permit the closing up of the key-board.

No. 37,218.—JOHN D. CLARK, of Leicester, Mass.—*Improvement in Buckets for Chain Pumps.*—Patent dated December 23, 1862.—This invention consists in forming the piston of a chain pump with a groove in its periphery in which is fitted an elastic ring of a size to suit the internal diameter of the tube.

Claim.—A grooved bucket in combination with an elastic packing ring, as herein described, and for the purpose set forth.

No. 37,219.—JOSEPHUS DANNER, of Milton, Ill.—*Improvement in Cultivators.*—Patent dated December 23, 1862.—This invention consists of an arrangement of adjustable bearers in connexion with the draught pole and supports for the rear end of the same, and a strap, by which the machine can be adapted to cultivate rows of corn at different distances apart, and also to adapt it to rows of different height.

Claim.—The combination and arrangement of the draught pole A, the adjustable beams B, the standards C, and shares *c*, the supports D, and the bar E, and the strap F, or its equivalent, all arranged and constructed substantially as and for the purposes delineated and set forth.

No. 37,220.—JOSEPH DODIN, of Brooklyn, N. Y.—*Improvement in Coil Oil Burners for Lamps.*—Patent dated December 23, 1862.—The object of this invention is to enable the ordinary coal oil chimney burners to be used without a chimney. The cone is made of thin metal, in two parts, of the form shown in the engraving, and provided with slots, and within the same is fitted a circular plate having in it an oblong slot that fits over the wick tube.

Claim.—First, the particular shape of the plate Fig. 4, with its slots *a a*, substantially as described.

Second, the circular plate Fig. 5, with its slot M, in combination with the movable tube Fig. 3.

No. 37,221.—JACOB DUNTON, of Philadelphia, Pa.—*Improved Can or Bottle Stopper.*—Patent dated December 23, 1862.—This device is designed more especially for medicine bottles and jars, and it consists of a plain cylindrical piece of cork fitting within a metal socket, which is formed with a milled head and an external thread to adapt it to be screwed into a metal neck, which latter is formed with an interior flange so as to afford an extended bearing for the cork.

Claim.—A bottle or can stopper consisting of the socket A, formed with a milled head B, external screw thread *a*, and internal shoulder *a'*, the neck D, formed with an external lip G, internal screw thread *d*, and annular flange E, and the imperforate cylindrical cock or plug C, all constructed, combined and arranged in the manner and for the purposes shown and described.

No. 37,222.—JOHN G. ERNST, of York, Pa.—*Improvement in Bayonet Scabbard and Guard.*—Patent dated December 23, 1862.—Fitting closely around the neck of the bayonet and against the shoulder of the blade is an elongated link or ring of the form shown in the engraving, one end of which is attached to a spring secured within the scabbard. To the lower end of the scabbard is secured, by a socket, a ball of India-rubber or other elastic material, which constitutes a guard for the point of the bayonet.

Claim.—First, the ring D, adapted and employed to operate in combination with the spring C and guard or scabbard A, in the manner and for the purposes specified.

Second, the combination of the guard ball B, with scabbard A, to constitute a combined scabbard and guard, as explained.

No. 37,223.—JOHN F. FOSDICK, of Lowell, Mass.—*Improvement in Looms.*—Patent dated December 23, 1862.—This invention relates to the method of winding the cloth on a

roller or bearer in proportion as the weaving of such cloth may progress, and instead of the ordinary cloth beam, as usually arranged underneath the breast beam, a rod or guide *a* is arranged horizontally in front of the lay and across the loom frame; below this rod and near to the floor is a long roller *b*, on which rests another roller *c*, each of which fits in grooves formed in two inclined posts, so that as the roll of cloth increases in size on the roller *c*, the latter will rise upward and the roll continue so to increase as long as the journals of the roller may be within their guide grooves.

Claim.—My improved application and arrangement, as described, of the guide *a*, the take-up roller *b*, the beam or roller *c*, and its guides *d d*, with respect to the lay and the breast beam of the loom.

No. 37,224.—HEMAN GARDINER, of New York, N. Y.—*Improvement in Churns.*—Patent dated December 23, 1862.—Upon the lower part of the dasher are the blades or arms, around which, at the bottom of the churn, is placed a cylindrical chamber perforated at its sides. Around the shaft is placed a tube D, open at top and bottom and communicating with the interior of the chamber. Concentric with the tube D are strainers E, composed of alternate strips of gauze and sheet metal, and of sufficient diameter to allow space for the milk to circulate freely. Inside the cylinders E is arranged a sliding cylinder having open and closed spaces alternately to correspond with the wire gauze or netting, so that by turning the same the flow of milk may be unobstructed or entirely closed or graduated at pleasure.

Claim.—First, the secondary chamber C, at the bottom of the churn, closed as described, having the apertures for the ingress and egress of the milk, in which chamber the agitating and permeating process is produced, separate from the milk in the body of the churn.

Second, the combination and arrangement of the chamber C, the cylinders or tubes D E E', around the dasher, operating so as to maintain, when the dasher is in motion, a circulation and agitation of the milk and air as described.

Third, the use and application of the combined gauze cylinder E and sliding cylinder E', for regulating the circulation of the milk while the process of churning is going on.

Fourth, the combination and arrangement of the inner tube D and outer tubes E E', so as to form the hollow space or chamber, through which space the milk is drawn downward to the bottom of the churn into the chamber C.

No. 37,225.—J. W. GARDNER, of Shelburne Falls, Mass.—*Improvement in Attaching Handles to Cutlery.*—Patent dated December 23, 1862.—This invention consists in providing the implements with a flat tang and having the handle formed of two parts, placed one upon each side of the tang, and secured thereto by means of ferrules fitted in recesses in the handles.

Claim.—Forming handles for cutlery and implements pertaining or analogous thereto, by means of the parts C C, secured to a flat tang B, by means of ferrules D D, fitted and compressed in recesses *a b*, made respectively in said parts and the tang, substantially as herein set forth.

No. 37,226.—MORGAN L. GROVER, of Duplainville, Wis.—*Improved Washing Machine.*—Patent dated December 23, 1862.—This invention consists of a cylindrical clothes receptacle formed of slats, with spaces between them to admit the suds, the said slats being grooved on their inner surfaces and the clothes receptacle having a rubber suspended within it. This rubber is formed in part of a flat strip of wood provided with journals at each end, the bearings of which are fitted within the journals of the clothes receptacle. To the inner edges of the strip of wood are attached two pieces of webbing, connected at their lower ends to a bar having its two opposite ends fluted.

Claim.—The combination of the clothes receptacle B and rubber E, constructed and arranged as shown, and used in connexion with the suds-box A, for the purpose specified.

No. 37,227.—HENRY A. HARRIS, of Battle Creek, Mich.—*Improvement in Hold-backs for Carriages.*—Patent dated December 23, 1862.—On the under side of the shaft is fitted a bar provided with a series of notches, into one of which a stirrup, to which the hold-back strap is attached, engages, the stirrup being held in place by means of a spring extending along the under side of the above named bar.

Claim.—The use of a graduated bar, in combination with a movable stirrup or ring and a spring, for the purpose and substantially as set forth.

No. 37,228.—JOSEPH C. HENDERSON, of Albany, N. Y.—*Improvement in Heaters.*—Patent dated December 23, 1862.—Over the fire-pot and within an enclosing cylinder is arranged a conical chamber, which is designed to contain the gaseous products sufficiently long to insure a perfect combustion before such products pass away from an annular opening at the base of the said cone. Around the base of the cone and within the enclosing chamber is a series of vertical pipes, so arranged that the products of combustion passing away from the base of the conical chamber come directly in contact with the enclosing case. Above the conical chamber is a cylinder, open at the top and provided with air pipes at the bottom, through which air passes and serves to carry off heat from the conical combustion chamber and from its cylinder.

Claim.—First, the range of vertical hot-air pipes *h h*, within the cylinder *d*, in combina-

Claim.—First, the range of vertical hot-air pipes *h h*, within the cylinder *d*, in combination with the cone *k*, that deflects the products of combustion against the base of said pipes and cylinder for the purposes and as specified.

Second, the conical chamber *k*, in combination with the cylinder *i* and air-pipes *m m*, and for the purposes specified.

No. 37,229.—JONAS HINKLEY, of Norwalk, Ohio.—*Improvement in Adjustable Links.*—Patent dated December 23, 1862.—This device is formed of two links pivoted together, and each provided with an opening in it near the pivot, the openings not being in line with each other. The two parts are allowed to turn freely on their pivots so as to adjust the link to two parts of a chain, the device being designed as a temporary fastening for the purpose of connecting a broken chain until it can be properly repaired.

Claim.—Having the sides of the two links pivoted together, as shown, with an opening in each link just in front of the pivot, all as herein set forth.

No. 37,230.—JOHN S. HOWELL, of Portmouth, N. H.—*Improvement in Governors.*—Patent dated December 23, 1862.—This invention consists in the use of a screw and traversing nut to work the lever which operates the gate or valve, for the purpose of graduating the supply of steam or water to the resistance to be overcome. The traversing nut is provided with a friction strap or box, so that when it is stopped at either end of the screw, after it has moved the valve or gate, the said nut will turn in the friction strap and prevent any of the parts from being broken or deranged.

Claim.—The friction strap or box *j*, on the nut *f*, in combination with the stop *h h* on the screw, substantially as described, for the purposes set forth.

No. 37,231.—LIVERUS HULL, of Charlestown, Mass.—*Improvement in Treating Caoutchouc.*—Patent dated December 23, 1862.—This invention consists in the employment, in connexion with chloride of sulphur, of the light fluid termed in commerce "carbon-spirits." which is made from rock oil, in the treatment of ground caoutchouc, for the purpose of rendering the same elastic.

Claim.—The application of carbon spirits, as described, and chloride of sulphur, to ground caoutchouc, substantially as and for the improvement of it, as specified.

No. 37,232.—JAMES HYDE, of New York, N. Y., assignor to THOMAS KEECH, of same place.—*Improved Floating Batteries for Ships and other Navigable Vessels.*—Patent dated December 23, 1862.—This invention consists in the employment of a floating turret, so arranged as to float in water contained within the ship's hull, or in a compartment formed therein, and be readily rotated by machinery in the turret. A communication is formed between the inside of the ship and the inside of the turret by a suitable passage-way through hollow frames which sustain the central shaft and through the said shaft.

Claim.—First, the employment of a floating turret in combination with a floating tank or ship's hull, substantially in the manner and for the purposes hereinbefore described.

Second, forming a communication between the interior of the ship A, and inside of the floating turret D, through the frame B, and hollow shaft F, substantially as and for the purpose set forth.

No. 37,233.—OLIVER LAFRENIERE, of New York, N. Y.—*Improvement in Boots and Shoes.*—Patent dated December 23, 1862.—This invention consists of a metallic sole frame A, provided with holes to receive rivets or screws by which it is secured to the inner sole. Extending from the frame A to the heel is a curved plate D, its rear end forming a dovetailed socket to receive the heel frame E, which latter is also formed of metal and secured to the inner sole by means of screws. The heel and sole frame are to be filled with wood or other suitable material.

Claim.—The boot or shoe provided with a dovetailed plate D, grooved heel frame E, and sole frame A, all made and united in the manner herein shown and described.

No. 37,234.—JOHN KELSEY, of Yardleyville, Penn.—*Improvement in Harrows.*—Patent dated December 23, 1862.—In the construction of this harrow one of the sides is extended forward beyond the other so as to have the front tooth at a point out of the centre of the harrow. To the rear of the harrow is attached a scraper by means of hooks or otherwise.

Claim.—The construction of the oblique extended point B, with its front tooth C, and the scraper M, when arranged and combined with the harrow, as herein described and for the purposes herein set forth.

No. 37,235.—JOSEPH S. IVES, of Morrissania, N. Y.—*Engraving Machine.*—Patent dated December 23, 1862.—This invention consists of a machine in which a graver or engraving tool is made to engrave from a pattern, and so constructed and arranged that by various adjustment of the parts the design to be cut can be varied in scale and proportion from the pattern or former

Claim.—The employment of a shaft or rod K, hung by a universal joint in an adjustable

stand F, in combination with a table D, or its equivalent, connected by a universal joint to one end of rod K and a tracer or engraving tool *e*, the whole operating substantially as set forth, to produce on a surface placed on table D various designs from patterns which guide the lower end of rod K, in the manner hereinbefore described.

Also, making the pivots, or their equivalents, of the universal joint in stand F adjustable or variable, substantially as described, for the purpose of changing the proportions of the designs cut from the same pattern.

Also, the construction of the machine substantially as described, so as to admit of changing the angles of the axes of the universal joint, as set forth, for the purpose of inclining the design in either direction to its base, while the pattern has no inclination, as hereinbefore described.

Also, the sliding rod *k*, in combination with the rod K and a suitable handle *i*, substantially as and for the purposes described.

No. 37,236.—BERNARD J. LA MOTHE, of New York, N. Y.—*Improved Metallic Framing for Ships and other Navigable Vessels.*—Patent dated December 23, 1862.—This invention consists in making the ribs and frames for ships and other vessels of metallic tubes or pipes crossing each other, and clamped together at the points of intersection.

Claim.—A series of metal tubes forming the ribs of ships and other vessels, passing between the longitudinal tubes forming the keel and keelson, substantially as specified.

Also, forming the knees uniting the decks to the sides of the vessel by bending the tubes forming or extending from the deck or rib tubes, as set forth.

Also, the combination of ribs formed of pipes, with longitudinal pipes passing between each other and clamped together, substantially as set forth.

No. 37,237.—FREDERICK MCKEE, of Pittsburg, Pa.—*Improvement in Lamp Wicks.*—Patent dated December 23, 1862.—The nature of this invention is explained by the claim.

Claim.—As a new article of manufacture, a lamp wick made out of pulp, and felted or hardened together, instead of being woven, plaited, or twisted, as herein set forth, and this whether the pulp be encased in an outer protection or not, as described.

No. 37,238.—D. MYERS, of South Bend, Ind.—*Improvement in Railroad Car Brakes.*—Patent dated December 23, 1862.—The object of this invention is to enable all the brakes of a train of railroad cars to be operated simultaneously from the tender or from the first car of the train, which is effected by means of levers and chains connected with and operated by a sleeve surrounding one of the axles of the said tender or car.

Claim—First, applying the rubbers to the wheels of a train of cars by means of suitable rods or chains and levers, and a sleeve surrounding one of the axles of the tender or one of the axles of the first car of the train, when a pulley K with bevelled edges, each edge having a spiral groove, is formed on the said sleeve, as set forth, for the purpose specified.

Second, the levers R and R', their pulleys *s s*, and chains *t* and *r*, the whole being arranged and operating in conjunction with the brake levers I and I', substantially as and for the purpose herein set forth.

No. 37,239.—THOMAS J. NEWLAND, of Utica, N. Y.—*Improvemen in Railway Lamps.*—Patent dated December 23, 1862.—This invention consists in the employment of curved or serpentine tubes extending from near the outer ends of the can to the connecting tube that supplies the oil to the burner, for the pupose of preventing the "swashing about" of the oil in the can caused by the jolting of the locomotive.

Claim.—The tubes B B', or their equivalents, constructed and operating substantially as described.

No. 37,240.—JOHN M. PERKINS, of Cleveland, Ohio.—*Improvement in Locks.*—Patent dated December 23, 1862.—This invention is designed as an improvement upon a lock for which a patent was granted to the said Perkins, August 5, 1862, and it consists in an arrangement of guard plates and stops by which it is designed to prevent the lock from being picked or opened except by the use of the proper key, and also to prevent impressions from being taken of the same.

Claim.—First, the guard plates D D' and stops F I, constructed, arranged, and operating as and for the purpose described.

Second, the guards K, the stop K', and the wards *a*, arranged and operated as and for the purpose specified.

No. 37,241.—GEORGE M. PHELPS, of Williamsburg, N. Y.—*Improved Combination Lock.*—Patent dated December 23, 1862.—Reference to the specification and drawings will be necessary for a proper understanding of this invention.

Claim.—First, the key spindle B, having both a rotary and a longitudinal movement, and provided with a feather *f*, in combination with the series of disk tumblers A A' A2 loosely mounted on the said key spindle, and each having an internal slot *g* and a yielding holder *e*, substantially as and for the purpose herein described.

Second, in combination with the series of independent disk tumblers A A' A2, each having

Claim.—The combination of the "governor" B with the valve N and the valve N' and the

Second, in combination with the series of independent disk tumblers A A′ A2, each having an internal notch or slot *g* and a series of notches *k* around its periphery, with a click *e* applied thereto, and all mounted on a sliding and turning spindle B, provided with a feather *f*, substantially as herein described, the notch or groove *j* in the said spindle, and pawl or stop K applied thereto, substantially as and for the purpose herein set forth.

Third, in combination with the bolt C, bolt tumbler D, and series of disk tumblers A A′ A2, mounted upon and formed so as to be turned and adjusted by the sliding and turning key spindle B, substantially as herein described, the collar L, or its equivalent, whereby the said key spindle, when disengaged from the said disk tumblers, can be engaged with and disengaged from the said bolt tumbler and bolt, substantially as and for the purpose herein set forth.

Fourth, the arrangement of the pawl P, by which the toothed hubs *g* are secured to the rims *r* of the disk tumblers, with the perforation Q and slot *a* in each of the said rims, the hole R in the lock case, and the tongue *c* of the bolt tumbler, substantially as and for the purpose herein described.

No. 37,242.—CORYDON PRATT, of Pratt's Hollow, N. Y.—*Improved Boot-crimping Machine.*—Patent dated December 23, 1862.—This invention consists in an arrangement of devices whereby the jaws, after having given the requisite amount of pressure to the leather, by first acting upon the curved portion at the instep with a force greater than at any other point, gradually diminishes the power as it is extended outward, for the purpose of giving a uniform thickness to the leather. During the backward movement of the jaws the pressure upon the leather is entirely removed.

Claim.—First, the combination and arrangement of mechanism, substantially as described, whereby the jaws when moved downward, or in the opposite direction from which the leather is forced on to the former, are released from pressure on the leather, substantially as represented and described,

Second, the U-shaped expander, provided with double inclined planes, and acting upon the springs G G in the manner substantially as set forth.

No. 37,243.—THOMAS H. RAY, of North Adams, Mass.—*Improvement in Umbrellas.*—Patent dated December 23, 1862.—This invention consists in the employment of a rod fitted longitudinally in the staff of an umbrella, and connected with the spring-catch that holds the frame of the umbrella up in such a manner that, by drawing the rod downward with the thumb or finger of the hand that holds the umbrella, the spring-catch will be forced inward so as to allow the umbrella to close.

Claim.—The combination of the closing-rod *b* with the spring-catch A, when they are constructed, arranged, and fitted to produce the result substantially as herein described.

No. 37,244.—WILLIAM ROBINSON, of Bellefontaine, Ohio.—*Improvement in Churns.*—Patent dated December 23, 1862.—The body of the churn is mounted upon a spindle that projects upward from a stand, and is fitted in a tight case formed on the bottom of the churn, so as to allow the same to be rotated upon the said spindle. Upon the spindle is secured a stationary dasher, provided with curved arms or agitators extending downward, their upper ends being secured to a cap which is made of oval or bevelling form on its upper surface, to allow the cream to fall back into the body of the churn. The cover of the churn is provided with an opening *i*, over the cap of the dasher.

Claim.—First, suspending the body A of a churn upon a central spindle *c′*, in the manner and for the purpose substantially as set forth.

Second, in combination with the cylinder A and spindle *c′*, the stationary dasher E, constructed substantially as and for the purpose set forth.

Third, the cap *e*, in combination with the spindle *c′* and opening *i*, substantially as and for the purpose set forth.

No 37,245.—JAMES ROSCOE, of Leicester, England.—*Improved Lubricator for Steam Engines.*—Patent dated December 23, 1862.—This device consists of a vessel made of brass or other suitable material, provided with studs and nuts for connecting the same to the smoke-box of a locomotive engine. To one end of a screw-plug is secured a metal pipe I, in which, when the steam is shut off as the locomotive is on a descending plane, the air is compressed, and thus serves to force out a portion of the tallow through a pipe K into the cylinder of the engine, to lubricate the same.

Claim.—Constructing a lubricator with an air-pipe I, in combination with the other parts, substantially as described and represented.

No. 37,246.—ALBERT G. SAFFORD, of Boston, Mass.—*Improvement in Mode of Operating Brakes for Railroad Cars.*—Patent dated December 23, 1862.—This invention consists in the employment of a spring drum and its coupling and winding mechanism, with the pulley and chains of the hand windlass and brake levers, so arranged that the brakes may be put in operation either by manual power or by the expansive force of the springs placed within the drum.

Claim.—The combination of the "equalizer" P with the pulley N and the chains of the windlasses R R and the system of brake levers.

Also, the arrangement of the spring drum S and its coupling and winding mechanisms (viz., the teeth *h i* and the system of one or more springs *k k*) with the pulley N, arranged between the two trucks, and so as to operate substantially in manner as specified.

Also, the combination and arrangement of two or more separate springs *k k* with the spring drum S and its rotary head or ratchet T.

Also, the arrangement and combination of a relieving mechanism (viz., the windlass *o*, with its ratchets *p q* and retaining and impelling pawls *r* U and connexions *l m n*) with the rotary spring drum S and the chain pulley N, arranged substantially as herein specified.

Also, the arrangement of the tripping lever V with the car body and the relieving mechanism, substantially as specified.

Also, the combination and arrangement of the auxiliary brake levers K K with the pulley N and the system of levers and rods connecting the brakes of trucks, as described.

No. 37,247.—ADOLPH S. SARONI, of New York, N. Y.—*Improvement in Reversible Neck Scarfs.*—Patent dated December 23, 1862.—Attached to the end of a scarf is a triangular piece of pasteboard or card, which is secured to the shirt collar by an elastic loop, so that the scarf may be readily turned to present either side to the front by simply reversing the card.

Claim.—A reversible scarf, provided with a neck-piece made of card board B, or any other suitable material, coated with hatters' sizing, and provided with an elastic loop or loops, so that the scarf A is properly attached to the collar either side out, at the same time presenting the appearance of a carefully-adjusted cravat or neck-tie.

No. 37,248.—SAMUEL J. SEELY, of Brooklyn, N. Y.—*Improvement in Metallic Houses.*—Patent dated December 23, 1862.—This invention consists in providing metallic houses with a base or sill, the bottom of which is of proper width to receive and sustain the extreme lower portion of the basement story, such lower portions being enclosed within a gutter formed by the sides and bottom of the metallic sill. The walls are formed of ribbed sheet-metal, the ribs *e* running longitudinally of the sheet, and rising vertically from the foundation, thus securing plane-faced surfaces *e′* between the ribs, through which are passed the bolts. In order to properly sustain the walls D D′, together with the corresponding wall necessary to complete the lower story, an intermediate connecting sill M is provided, which is formed with a central bearing plate having longitudinal "beaded" projections rising above and projecting below the said plate.

Claim.—First, the foundation sill *a a′ a2*, constructed in the manner and for the purpose substantially as described.

Second, constructing the sheet-metal walls D D′, with ribs *e* and plane-faced surfaces *e′*, substantially as and for the purpose set forth.

Third, the connecting sill M, constructed in the manner and for the purpose substantially as described.

Fourth, the girders G, in combination with the walls D D′, substantially as described.

No. 37,249.—WILLIAM H. TOWERS, of New York, N. Y.—*Improved Cork.*—Patent dated December 23, 1862.—Extending through the cork from the top to the bottom are two ends of a wire which are bent at the lower ends so that, by pulling the upper part, the cork may be readily drawn out.

Claim.—The cork with the wire extending through it from top to bottom, the whole constructed and arranged substantially as set forth and for the purpose specified.

No. 37,250.—OTIS TUFTS, of Boston, Mass.—*Improvement in Operating Ordnance.*—Patent dated December 23, 1862.—This invention relates to a method of operating heavy ordnance in fortifications or on shipboard. The gun-carriage is mounted upon a turntable which is connected with a sliding or recoil carriage on which the table turns and the gun is run out, trained and withdrawn by steam power, and when withdrawn the muzzle may be turned to a position to allow the piece to be loaded within the fort or vessel.

Claim.—The gun-carriage with its attached turntable, in combination with the sliding or recoil carriage on which the table turns, and the training carriage or slide that supports them, substantially as described.

Also, operating a pivot-gun carriage and the gun thereon, substantially in the manner set forth, viz: by locating the shaft through which the power is transmitted, so that it will be concentric with the training pivot or axis.

Also, the training pin or pivot *i′*, when formed to admit the passage of a shaft concentrically through it, and combined with the training carriage of the gun.

Also, so arranging and combining a friction-producing clamp with the slide and ways of a gun carriage that it may be operated at one central point, substantially in the manner described, in the place of two separate clamps, each requiring its own adjustment, as heretofore employed.

Also, so combining the clamp *s* and the clamp *r* that they are operated by one device in common, substantially in the manner set forth.

No. 37,251.—WILLIAM S. WEIR, Jr., of Monmouth, Ill.—*Improvement in Cultivators.*—Patent dated December 23, 1862.—The tongue or draught beam of this machine is secured to a frame that rests upon two wheels. The tongue projects in the rear of the frame and is provided with a plough-supporting device. The plough beams are hinged between adjusting pieces, which latter are attached to loop pieces upon the posts of the main frame, by means of which the depth of the furrow can be regulated.

Claim.—First, the combination and arrangement of the frame B, tongue A, and wheels C C, substantially as set forth.

Second, the combination with the posts B' B' and plough beams of the loops *a* and draught-adjusting devices *b b*, substantially as set forth.

No. 37,252.—ALLEN B. WILSON, of Waterbury, Conn.—*Photographic Plate Holder.*—Patent dated December 23, 1862.—This invention is designed as an improvement upon a photographic camera, for which a patent has been previously granted to the said Wilson, and it consists in the use of a double funnel and stem with separate channels, so that each bath can be given through a channel of its own, thus avoiding the necessity of careful cleaning when both baths are given and withdrawn through one channel.

The plate holding the negative glass is secured in a fixed position, and the snap spring as previously used is dispensed with, the negative glass being inserted in front instead of the rear of the plate.

Claim.—First, the double funnel and stem with separate channels, constructed and operating substantially as and for the purpose described.

Second, securing the negative glass in position in the manner and by the means of a plate-holder, constructed and operating substantially as described.

No. 37,253.—ASA L. DARBY, of White Creek, N. Y., assignor to Himself and JOHN H. BALCH, of Cambridge, N. Y.—*Improvement in Harvesters.*—Patent dated December 23, 1862.—This device is designed to be applied more particularly to the machine for which a patent was granted to the said Darby, September 10, 1861, and it consists in the employment of a lever connected at its outer end by a cord or chain to the finger-bar, and two shafts coupled by a universal joint and operated by means of bevel wheel gear in combination with a vibrating frame.

The cutter guard or finger is constructed with a cylindrical opening in the rear of the points of the cutters and forward of the cutter-bar, so as to give free passage to any accumulation of grass, stubble, &c. The front part of the guard is provided with cutting edges on the upper ridge for the purpose of cutting away any wet or tangled grass.

Claim.—First, the apparatus for lifting and turning over the finger-bar, to wit, the lever L and chain, with shafts S and G, coupled by a universal joint, and operated by bevel wheel gear K and R, with shaft and winch, when used in combination with the vibrating frame B, for the purposes set forth in the within specification.

Second, the construction of the cutter guard or finger as described, with the cylindrical opening back of the points of the cutters and forward of the cutter-bar, and providing the front part of the guard with cutting edges on the upper ridge and flank edges and lower ridge, or on the upper ridge and flank edges alone, for the purpose specified.

No. 37,254.—THOMAS FIRTH, of Camden, N. J., assignor by *mesne* assignments to Himself and G. W. ADLER.—*Improvement in Churns.*—Patent dated December 23, 1862.—To the spindle of the machine are attached bent arms, on the outer end of each of which is arranged to revolve freely a flutter or propeller wheel. To the inside of the barrel are secured four ribs, each rib having two concave recesses so arranged as to allow the wings of the flutter wheels to pass through the spaces formed by the recesses without coming in contact with the ribs.

Claim.—Any suitable number of flutter wheels E and F, when arranged to revolve in the direction shown, in combination with any convenient number of ribs H. H I, &c., and their concave recesses, the whole being arranged and operating as and for the purpose set forth.

No. 37,255.—JOHN S. GILES and WILLIAM HALLADAY, of New York, N. Y., and JOHN A. RUE, of Brooklyn, N. Y., assignor to JOHN S. GILES and WILLIAM HALLADAY, aforesaid.—*Improvement in Apparatus for Pressing Hats.*—Patent dated December 23, 1862.—This invention consists of an expanding heated die adapted to press hats and bloomers with a flaring or bell crown, from one piece or sheet of material, or several pieces sewed together. The crown die is composed of hinged side pieces and front and back pieces and a central plunger or block, which latter is made hollow and receives within it the movable iron by which the crown dies are heated. The crown die is caused to slide up and down, being operated by means of a treadle.

Claim.—The block *d* fitted to slide vertically in combination with the hinged blocks *c c* and *b b*, and forming the crown die for pressing flaring or bell-crowned hats or bloomers, substantially as specified.

No. 37,256.—JOHN M. KINNEY, of Columbus, Ohio, assignor to Himself and DANIEL D. WINANT, of Brooklyn, N. Y.—*Improvement in Skeleton Skirts.*—Patent dated December 23, 1862.—This skirt is formed of a series of springs radiating from a waist-band, and confined to each other by means of tapes or cords, so that each of the springs can be depressed at one side without the other side being correspondingly pressed out.

Claim.—A skeleton skirt formed of springs radiating from a suitable waist-belt and connected to each other to retain them in a skirt form by elastic or non-elastic cords, tapes, or their equivalents, substantially as specified.

No. 37,257.—BENJAMIN GREEN MARTIN, of New York, N. Y., assigor to JEROME BUCK, of same place.—*Improvement in Divided Vent-bushing for Ordnance to Facilitate Unspiking.*—Patent dated December 23, 1862.—This invention consists in providing any fire-arm, especially cannon, with a bisected bushing or cylinder and vent-field, both detachable from the fire-arm or cannon and from each other. The cylindrical tube is divided into two equal parts which are doweled and fitted together. The vent-field is made detachable to enable the wrench or lever to operate in drawing out the bisected cylinder.

Claim.—The divided and doweled cylinder, the combination of the said bisected and perforated cylinder and vent-field, detachable from the cannon or other fire-arm and from each other, for the purpose of bushing any vent-hole whenever needed, and the combination of the bisected and perforated cylinder and wrench, detachable from each other as well as from the vent-hole, for the purpose of unspiking cannon or other fire-arm and showing the vent-hole, all operating as above described.

No. 37,258.—JOHN JACOB MILLER, of Chicago, Ill., assignor to Himself and ERNST PRUSSING, of same place.—*Improved Apparatus for Condensing and Evaporating.*—Patent dated December 23, 1862.—This apparatus is composed of a series of dishes or pans placed in alternately reversed positions and secured upon a revolving shaft by means of nuts and screws and collars within a close vessel, on the exterior of which may be placed when necessary a jacket or coil for the reception and circulation of a heating or cooling medium.

Claim.—First, the combination of the closed vessel A and alternately concave and convex rotating pans D and E, with suitable induction and eduction ports, the whole being arranged to operate substantially as and for the purposes set forth.

Second, the combination of the surrounding jacket or coil J, with the said closed vessel and pans, substantially as and for the objects specified.

Third, securing the pans D and E upon the shafts B by means of the collar M, tubes *d*, and clamping nut N, substantially as and for the purposes described.

No. 37,259.—ELNATHAN SAMPSON, of Waterford Junction, N. Y., assignor to SAMPSON and TABBIT'S SCALE COMPANY, of Green Island, N. Y.—*Improvement in Platform Scales.*—Patent dated December 23, 1862.—This invention is designed as an improvement upon a scale for which a patent was granted to the said Sampson, May 24, 1859, and it consists in the employment of bell crank levers, connected to each other and to double knife-edged, vertical or pendant levers and to a graduated scale-beam in such a manner that by the action of the said bell-crank levers the oscillating motion of the vertical or pendant levers is correctly transmitted to the scale-beam.

Claim.—The employment or use of bell-crank levers *k l k1 l1 p q*, connected by rods, or their equivalents, in combination with the oscillating vertical or pendant levers C C1, from which the platform A is suspended, all constructed, arranged, and operating substantially in the manner and for the purpose herein shown and described.

No. 37,260.—WILLIAM H. SMITH, of Birmingham, Conn., assignor to Himself and R. M. BASSETT, of same place.—*Improvement in Projectile for Rifled Ordnance.*—Patent dated December 23, 1862.—This invention consists in the employment of a jacket or case applied to a projectile having a smaller diameter than that of the bore of the arm in which it is used, in such a manner as to retain the projectile centrally within the gun, to leave the gun with it and to remain attached to it during its flight, and only to be detached upon the projectile striking an object.

Claim.—The jacket or case B, constructed and combined with the body A or projectile proper by means of rosin or other suitable cement in its annular cavity *d*, substantially as and for the purpose herein specified.

No. 37,261.—DAVID VOGL, of London, Great Britain, assignor to SIMON GIUTERMAN, of New York, N. Y.—*Improvement in Vests.*—Patent dated December 23, 1862.—Patented in England December 10, 1861.—This invention consists in making the vest open behind instead of before, and fastening it by means of straps or bands, the front of the vest being furnished with buttons or studs and imitation button holes.

Claim.—The construction of vests closed in front without arm-holes and held in position around the person by adjustable bands, substantially as described.

No. 37,262.—WINDSOR B. WAIT, of Greenwood, Mass., assignor to Himself and JOSEPH

Claim.—Transmitting the power of the engine to the driving axle by means of a driving pin-

No. 37,262.—WINDSOR B. WAIT, of Greenwood, Mass., assignor to Himself and JOSEPH A. FAIRBANKS, of Melrose, Mass.—*Improved Feed Bag for Horses and other Animals.*—Patent dated December 23, 1862.—This invention consists in providing a nose-bag with an elastic mouth or head cap so that it will fit closely upon the head of the animal. The head cap is provided with a series of openings for the admission of fresh air. The head strap or hanger is also made of some elastic material to cause the bag to be drawn up as the food within the same diminishes while the animal is feeding.

Claim.—The nose-bag as made either with the head cap provided with air inlets *b b b b* or with the same and an elastic mouth, arranged substantially as specified.

Also, the nose-bag as made with an elastic hanger or its equivalent, and in other respects in manner and so as to operate substantially as hereinbefore specified.

No. 37,263.—WILLIAM G. WARDEN and THOMAS K. PETTY, of Pittsburg, Pa.—*Improvement in Oil Stills.*—Patent dated December 23, 1862.—The object of this invention is to prevent the ill effects of the overflowing of the still, by arresting and returning to the still or other receptacle all crude and unvaporized oil and other solid or liquid substances which may boil over or be carried with and by the action of the vapor into the pipe leading from the condensing worm.

Claim.—The use in stills for distilling hydro-carbon oils, of a double trap constructed substantially as hereinbefore described, so connected with the still *z*, its worm-pipe or goose-neck, as not to return to the still the heavier vapors or any condensed products of distillation, but so that any unvaporized liquid or solid substance, carried over with the vapor or boiling over from the still through the still-head or goose-neck, shall be arrested before reaching the worm or condenser, and either returned to the still or collected in a separate receptacle.

Also, drawing off the unvaporized matter which is carried over from the still in the process of distillation and thereby preventing it passing into the condenser or receptacle for distilled oil by means of the apparatus, substantially as hereinbefore described.

No. 37,264.—NATHAN D. MORGAN, of Mount Pleasant, N. Y.—*Improvement in Passenger Tickets.*—Patent dated December 23, 1862.—The nature and object of this invention are explained by the claim.

Claim.—The combination of a new and improved form of passenger ticket to be used on railroad cars, steamboats and all other public conveyances for passengers, with a card or slip of paper printed or illustrated, or both, so that the former shall enclose the latter as with an envelope or wrapper, with an aperture in the side of the ticket through which the enclosed card or slip of paper shall exhibit some conspicuous word or illustration to attract the attention of the passenger holding the same, and also open at the ends so that the enclosed card or slip of paper may be easily removed therefrom and retained by the passengers, substantially as hereinbefore set forth.

No. 37,265.—SAMUEL J. SEELY, of Brooklyn, N. Y.—*Improvement in Canal Locks.*—Patent dated December 23, 1862.—This invention consists in a method of employing metal of corrugated or ribbed configuration in the construction of canal locks and the parts adjacent thereto, for the purpose of saving the labor and expense attending the setting and finishing of stone masonry in the construction of such locks.

Claim.—First, the method, substantially as herein described, of constructing canal locks, whereby metal instead of masonry is used to give the requisite strength to the whole structure

Second, sustaining the side walls and bottom or flooring of canal locks by means of corrugated metal or its equivalent, substantially as described.

Third, sustaining the walls of the gate channels by means of corrugated metal or its equivalent, substantially as described.

REISSUES.

No. 1,253.—ROBERT H. LONG, of Philadelphia, Pa.—*Improvement in the Mode of Propelling Railway Cars by Steam.*—Patented January 24, 1860; reissued January 15, 1861; again reissued January 7, 1862.

Claim.—The arrangement of the steam engine and boiler relatively to each other, and upon the platform of a railway car, or other carriage, substantially in the manner specified.

No. 1,254.—ROBERT H. LONG, of Philadelphia, Pa.—*Improvement in the Mode of Propelling Railway Cars by Steam.*—Patented January 24, 1860; reissued January 15, 1861; again reissued January 7, 1862.

Claim.—Transmitting the power of the engine to the driving axle by means of a driving pinion F attached to the frame of the engine and arranged relatively to the driving axle to operate substantially as specified.

No. 1,255.—CYRUS H. MCCORMICK, of Chicago, Ill., assignee of LEANDER J. MCCORMICK, WILLIAM S. MCCORMICK, and CYRUS H. MCCORMICK.—*Improvement in Reaping and Mowing Machines.*—Patented May 11, 1858; reissued No. 973, June 5, 1860; again reissued January 7, 1862.

Claim.—First, the combination of arms *n o*, or their equivalent, with the frame, pinion wheel and driving wheel of a reaping or mowing machine; so that, at one end, said arms or equivalent shall vibrate or turn on or around the axis of the pinion wheel, which gears into and receives motion from the master cog-wheel, and at the other end be properly connected with the axle or journal of the driving wheel, in such manner that, by shifting adjustable fastenings, the height of the frame and cutting apparatus of the machine, relatively to that of the driving wheel can be varied without affecting the gearing of the machine, substantially as described.

Second, the combination of the arm or plate connexion of the driving wheel with the frame of the machine, substantially as described, or the equivalent thereof, with gearing for changing the velocity and direction of the motion generated by the driving and master wheels, and communicating the same to the cutter.

Third, the combination of said arm or plate connexion, with an adjustable wheel on the opposite side of the machine, for raising and lowering the cutting apparatus to suit required changes in the height of cutting grain and grass.

No. 1,256.—CYRUS H. MCCORMICK, of Chicago, Ill., assignee of LEANDER J. MCCORMICK, WILLIAM S. MCCORMICK, and CYRUS H. MCCORMICK.—*Improvement in Reaping and Mowing Machines.*—Patented May 11, 1858; reissued No. 973, June 5, 1860; again reissued January 7, 1862.

Claim.—First, the combination of the segmental arms, or their equivalent, having notches or holes for adjustment, with the frame of the machine and adjusting bolt, or its equivalent, so as to raise and lower the frame and cutting apparatus and hold them in any desired position, substantially as set forth.

Second, holding the segmental arms, or their equivalent, to the frame of the machine by means of the hooked head of the bolt or detent in the notches of the sectors, substantially as shown and described.

No. 1,257.—AMERICAN FLASK AND CAP CO., of Waterbury, Conn., assignees of CHARLES HICKS, of Haverstraw, N. Y.—*Improvement in Machine for Varnishing Percussion Caps.*—Patented February 17, 1857; reissued January 14, 1862.

Claim.—First, a series of rods *b*, or their equivalents, connected by any suitable means, and a plate A, perforated at distances to correspond with the rods employed in combination to apply varnish or other material to a number of caps simultaneously.

Second, the combination of a frame *c c' c**, carrying a number of wires or rods *b b*, or their equivalents, to take up the varnish, a trough F, to contain the varnish and suitable guides above the said trough to receive a plate which carries the caps, the whole being constructed and operating together substantially as described.

Third, the plate H, containing holes corresponding in number and arrangement with the wires or rods *b b*, or their equivalents, arranged relatively to the trough F, the vertically moving frame *c c' c**, and the guides G, substantially as described for the purpose set forth.

No. 1,258.—J. H. DENNIS, of Louisville, Ky.—*Improved Mode of Collecting Fares on Street Railway Cars.*—Patented December 17, 1861; reissued January 14, 1862.

Claim.—As an improvement in street railroad cars, the combination of the platformless rear, either without a door or with one for exit only, with the platform and door in front, whereby all persons entering the car, being compelled to pass the driver, he can, without inconvenience, act as collector or oversee the deposit of their fares.

No. 1,259.—HARRISON KALBACH and MARY ANDREWS, of Bernville, Pa., acting executrix of ABRAHAM ANDREWS, (deceased.)—*Improvement in Horizontal Water Wheels.*—Patented August 30, 1859; reissued January 14, 1862.

Claim.—First, the curved concave buckets having curved or eccentrically-formed tops and bottoms, as described.

Second, in combination with the buckets curved as described, the spiral water-way or chamber underneath them, arranged within a box A, substantially as shown and described.

No. 1,260.—FREDERICK E. SICKLES, of New York, N. Y.—*Improvement in Steam Engines.*—Patented September 19, 1845; extended for seven years; reissued February 21, 1860; again reissued January 21, 1862.

Claim.—Imparting a coexisting movement to two reciprocating catch pieces in the operation of the trip of cut-off valves, substantially as described.

No. 1,261.—ST. JOHN O'DORIS, of Philadelphia, Pa.—*Improvement in Fertilizers.*—Pat-

No. 1,261.—Sr. John O'Doris, of Philadelphia, Pa.—*Improvement in Fertilizers.*—Patented December 21, 1861; reissued January 28, 1862.

Claim.—The use of coal ashes as a basis for deodorizing, absorbing, and retaining of animal, vegetable, and mineral matter, in solution or otherwise, when united in a fertilizing compound, substantially as set forth.

No. 1,262.—David M. Osborne, of Auburn, and William A. Kirby, of Buffalo, N. Y., assignees of Byron Densmore, of Sweden, N. Y.—*Improvement in Harvesting Machines.*—Patented February 10, 1852; reissued January 28, 1862.

Claim.—First, hanging the driving wheel in a supplementary frame, or its equivalent, which is hinged at one end by the main frame, while its opposite end may be adjusted and secured at various heights, or be left free as desired, whereby the cutting apparatus may be held at any desired height for reaping, or be left free to accommodate itself to the undulations of the ground, substantially as described.

Second, the employment in a harvesting machine of a wheel, provided with a crank and lever, for the purpose of raising and lowering the outer end of the finger bar, to cut high or low, substantially as described.

No. 1,263.—Frederick E. Sickles, of New York, N. Y.—*Improvement in the Motion of Exhaust Valves for Steam Engines.*—Patented October 19, 1844; extended for seven years; reissued January 1, 1861; again reissued January 28, 1862.

Claim.—Giving to each exhaust valve alternately, while the piston is at or near the end of the cylinder furthest from it, a large amount of motion as compared with the motion of the other exhaust valve at that time, so as to more freely exhaust the cylinder with less extent and greater ease of motion to the valves than has been done heretofore, substantially as described.

Also, imparting these motions to the exhaust valve by means of a rocker interposed between the first motion from the engine and the valves, so that it will increase and diminish its leverage relative to each valve, while moving them, and thereby impart my improved motion.

No. 1,264.—William W. Wade, of Long Meadow, Mass.—*Improvement in Sewing Machines.*—Patented February 1, 1859; reissued January 28, 1861.

Claim.—A driving shaft of a sewing machine, having cranks set at right angles to each other, or so approximating thereto as to overcome or avoid a dead centre in the movement of the shaft, substantially as and for the purposes set forth, in combination with the treadles H H, the driving pulley N, and a device for preventing a retrograde motion of the shaft.

Second, in combination with a sewing machine driving shaft, a ratchet device for preventing a retrograde motion when such device is caused to cease its action upon the shaft by means of friction induced between its parts by the forward revolution of the shaft, and is caused to come into action when a back thrust comes upon the shaft, constructed substantially as and for the purpose set forth.

No. 1,265.—Henry Migeon, of Wolcottville, Conn., assignee of Jean Louis Baudelot, of Harancourt, France.—*Improved Method of Cooling Beer.*—Patented November 1, 1859; antedated April 13, 1856; reissued January 28, 1862.

Claim.—The process of cooling beer, by causing it to trickle in a thin film along one surface of metal, as specified, while such surface is kept cool by the passage in the reverse direction of water or other cooling liquid, in contact with the other surface thereof, substantially as and for the purposes specified.

No. 1,266.—Henry Migeon, of Wolcottville, Conn., assignee of Jean Louis Baudelot, of Harancourt, France.—*Improved Method of Cooling Beer and other Liquids.*—Patented November 1, 1859; antedated April 13, 1856; reissued January 28, 1862.

Claim.—Directing the trickling liquid to be cooled from the bottom of one pipe to the next below it, by means of a downward projection, substantially as described, whereby the distribution of the liquid to be cooled is more uniformly maintained, and the contact thereof with the whole cooling surface secured, as set forth.

Also, a trough with perforations for supplying the liquid to be cooled, when combined with a screw or perforated receptacle within said trough, for detaining any foreign substance, or for equalizing the distribution in said trough of the liquid to be cooled, as specified.

No. 1,267.—Henry Migeon, of Wolcottville, Conn., assignee of Jean Louis Baudelot, of Harancourt, France.—*Improved Method of Cooling Beer and other Liquids.*—Patented November 1, 1859; antedated April 13, 1856; reissued January 28, 1862.

Claim.—A cooling apparatus for liquids, composed of a vertical range of pipes, passing one liquid successively from the lower to the upper pipes in said range, in combination with the perforated trough *d*, or its equivalent, supplying the other liquid, which trickles over the surface of said range of pipes, as set forth.

No. 1,268.—Ethan Allen, of Worcester, Mass.—*Improvement in Repeating Fire-arms.*—Patented July 3, 1860; reissued February 4, 1862.

Claim.—The combination of a revolving cylinder, having its chambers extending entirely through the block, with an unbroken recoil shield having a projection on its face, as described and for the purpose set forth.

Also, in the said combination, as described, the making of the said projection on the recoil plate in the form of an inclined plane, substantially as and for the purpose specified.

No. 1,269.—Gustavus Finken, of Brooklyn, N. Y.—*Improvement in the Manufacture of Cube Sugar.*—Patented August 20, 1861; reissued February 4, 1862.

Claim.—The formation of the cubes from the granular sugar in the manufacture of cube sugar by means of machinery composed of an endless or rotating series of moulds fitted with compressing and discharging pistons, and having applied, in combination with them, a cam or cams, or their equivalent, for operating the pistons, one or more at a time, in regular succession throughout the whole of the series, substantially as specified.

No. 1,270.—John J. Haley, of South Dedham, Mass.—*Improvement in Rollers for Wringing Machines.*—Patented January 14, 1862; reissued February 4, 1862.

Claim.—The connecting or uniting of India-rubber rollers to metallic shafts by the means and in the manner described.

No. 1,271.—Henry Steinway, Jr., of New York, N. Y.—*Improvement in Piano-forte Actions.*—Patented June 15, 1858; reissued February 4, 1862.

Claim.—The repeating lever *e* attached to the arm *j* at the back of the jack, and arranged relatively to the hammer and operating under the control of a spring, substantially as described and for the purpose set forth.

Also, the employment, in combination with the so-applied repeating lever, of a screw *k* applied to operate substantially as and for the purpose set forth.

No. 1,272.—Daniel Treadwell, of Cambridge, Mass.—*Improvement in the Manufacture of Cannon.*—Patented December 11, 1855; reissued February 4, 1862.

Claim.—First, in making a cannon consisting of a body in which the calibre is formed, the walls of which are of one piece surrounded by rings, hoops, or tubes in one or more layers placed upon said body under great strain, by which said body is compressed and the natural equilibrium of the molecules or particles of which it is composed disturbed by their being brought nearer together, and this is accomplished in the manner set forth, viz., by making the hoops smaller than the part which they are to surround and then expanding them by heat, and then suffering them to shrink or contract after having been put in their places.

Second, the method of securing the hoops to the body of the gun and the several layers of hoops to each other by screw threads, when they shrink to their places, as described.

No. 1,273.—Cancelled.

No. 1,274.—David B. Rodgers, of Alleghany, Pa.—*Improvement in Cultivator Teeth.*—Patented November 1, 1845; reissued September 20, 1859, and extended; again reissued February 11, 1862.

Claim.—First, making cultivator teeth entire of thin plate steel, the shank or upper part being bent or curved round in front, substantially as described and for the purposes set forth, irrespective of the mode of attaching the tooth to the beam.

Second, attaching cultivator teeth to the cultivator frame by inserting the upper end of the shank (curved round in front for that purpose) into a suitable hole in the beam, and driving a key or wedge into the cavity of the tooth, thereby pressing the shank against the sides and front of the hole in the beam, and thus securing it in its place.

No. 1,275.—Charles T. James, of Providence, R. I.—*Improvement in Projectiles.*—Patented February 6, 1856; reissued December 11, 1860; again reissued February 11, 1862.

Claim.—Combining with the body of the projectile an expansible packing, substantially as described, and capable of being expanded outwardly against the bore of the cannon and into the grooves thereof, if rifled, by the force of the exploded charge acting inside of such packings, substantially as described.

Also, connecting the expansible packing with the body of the projectile by clips, which will not prevent the required expansion, and which will insure the rotation of the body of the projectile with such packing as described.

Also, making the outer surface of the packing of projectiles intended to be forced into contact with the bore of the cannon, and into the grooves thereof, of fibrous, textile, or equivalent nonmetallic substance, substantially as described.

No. 1,276.—George Mallory, of Watertown, Conn.—*Improvement in Hoop Skirts.*—Patented October 19, 1858; reissued February 18, 1862.

Claim.—Providing for the vertical flexure of one or more of the hoops of a skirt at the sides thereof by means of flexible pieces, or their equivalents operating substantially as and for the purpose specified.

No. 1,277.—HENRY KNIGHT, of Jersey City, N. J.—*Improvement in Means for Manufacturing Hydraulic Cement Pipes.*—Patented May 8, 1860; reissued February 25, 1862.

Claim.—First, the use of a vertical stationary central core, or its equivalent, substantially as and for the purpose set forth.

Second, the combination of the detachable collar G, or its equivalent, and a flask or exterior mould F *d e*, constructed with two different diameters, and with a shoulder *f*, or its equivalent, for the purpose set forth.

Third, the use of the shouldered detachable base or bottom E, substantially as and for the purposes set forth.

Fourth, the use of a detachable collar or tool G, or its equivalent, for forming a right angle or nearly right angle socket within one end of the cement pipe, substantially as and for the purposes set forth.

Fifth, the use of an adjustable perforated centring table in combination with a cement pipe machine, substantially as and for the purposes set forth.

Sixth, producing by vertical moulding, with means substantially such as described, sections of cement pipe with external collars and right angle or nearly right angle sockets, as set forth.

Seventh, removing the moulded cement pipe from the machine by raising it vertically, substantially as set forth.

No. 1,278.—JOHN G. PERRY, of South Kingston, R. I.—*Improvement in Machines for Mincing Meats.*—Patented February 26, 1850; reissued February 25, 1862.

Claim.—First, the use and employment of the studs *s s s*, Fig. 3, with one or both of the discharge elements L L, substantially as described and for the purpose set forth.

Second, combining the knives and space blocks with the case of a meat cutter in the manner substantially as described and for the purposes set forth.

No. 1,279.—SANFORD, HARROUN & CO., of Buffalo, N. Y., assignees through mesne assignments of GEORGE F. HEDARD, GEORGE J. HILL, and SIMON D. ROCKWELL, of the same place.—*Improvement in Printing Presses.*—Patented August 7, 1860; reissued February 25, 1862.

Claim.—First, the combination of the spool or roller C, or the equivalent thereof, which carries a roll of printing paper or thin card board, which may be wound into a roll with feeding rollers which have an intermittent feed movement, and the printing and numbering mechanism of a printing and numbering machine, substantially as described, so that the paper or card board may be run off from the roller and fed in by an intermittent movement of the feed rollers, and properly presented for printing and numbering coupon tickets from a continuous sheet of printing paper or card board, substantially as set forth.

Second, the combination and arrangement of the cutting mechanism with a roller, or equivalent, carrying a roll of paper or card board and the printing and numbering mechanism of a printing and numbering machine, so that coupon and other tickets may be printed, numbered, and cut simultaneously from such printing paper or card board, substantially as described.

Third, in a machine for printing and numbering coupon tickets, in combination with the printing mechanism for printing the tickets, making the numbering wheels adjustable horizontally, substantially as described, whereby the machine can be readily adapted to numbering tickets of different widths.

Fourth, in a machine for printing tickets from a roll or continuous sheet of printing paper or thin card board, making the feed rollers so as to act upon a portion of the width of the sheet instead of the whole width, whereby we are enabled to feed in thin sheets of printing paper or thin card board in a smooth and even manner.

No. 1,280.—ALEXANDER SWIFT, of Cincinnati, Ohio, assignee through mesne assignments of ISSACHAR FROST and JAMES MONROE, of Albion, Mich.—*Improved Mode of Separating Flour from Bran.*—Patented February 27, 1849; reissued March 13, 1855; again reissued May 11, 1858; and again reissued February 25, 1862.

Claim.—First, the combination of the essential features severally described and severally numbered 1, 2, 3, and 4, or their equivalents, substantially as described and for the purposes specified in the several numbers.

Second, the combination of the essential features severally described and severally numbered 1, 2, and 5, or their equivalents, substantially as they are described; the purpose of the combination being substantially as set forth in number 5.

Third, the combination of the essential features severally described and severally numbered 1, 2, and 6, or their equivalents, substantially as they are described; the purpose of the combination being substantially as set forth in number 6.

Fourth, the combination of the essential features severally described and severally numbered 1, 2, 6, and 7, or their equivalents, substantially as they are described; the purpose of the combination being substantially as set forth.

Fifth, the combination of the essential features severally described and severally numbered 1, 2, 4, 5, 6, and 7, or their equivalents, substantially as specified; the purpose of the combination being substantially as severally set forth.

No. 1,281.—JOHN E. BROWN, of Woonsocket, and STEPHEN S. BARTLETT, of Providence, R. I., assignors to JOHN E. BROWN, STEPHEN S. BARTLETT, aforesaid, and THOMAS H. DODGE, of Washington, D. C.—*Improvement in Grain and Grass Harvesters.*—Patented January 2, 1855; reissued January 1, 1861; again reissued February 25, 1862.

Claim.—First, the combination of a hinged or yielding drag bar I, or its equivalent, with the main frame and finger bar or cutter stock of a harvesting machine in such a manner that as the frame is advanced the drag bar, or its equivalent, will be advanced, and that in its turn will draw forward the finger bar which supports the cutting apparatus, which is left free to rise or fall bodily or at the heel end, while the outer end rests on a lower surface without affecting the motions of the main frame.

Second, the use and employment in a harvesting machine of a yielding drag bar, or its equivalent, arranged on the inner side of the machine in combination with hinging the heel of the finger bar to said drag bar, whereby the entire cutting apparatus is left free to rise or fall bodily, or either end thereof, independent of the other and without affecting the motions of the main frame.

Third, hinging the front elevated end of a drag bar to which the heel of the finger bar is connected in a harvesting machine to the front inner side of the main frame in combination with giving said drag bar a lateral support in rear of the axis of the main wheels, whereby the strain on the frame is divided, while the rear end of the drag bar is retained in proper position, but left free to rise and fall independently of the main frame, for the purpose stated.

Fourth, fastening the heel end of the finger bar which supports the cutting apparatus in a harvesting machine to a heel piece, which in turn is hinged in a recess in the end of a yielding drag bar, whereby the cutting apparatus is properly supported and kept in position at the side of the machine, and yet left free to conform to the inequalities of the ground without affecting the motions of the main frame.

Fifth, the combination of the drag bar I with rock shaft H′ and the front of the main frame, substantially as set forth.

Sixth, the use of a single draw or drag bar attached at its forward and elevated end to the machine by a connexion, so that its rear end can rise and fall, as specified, in combination with a hinged or rigidly connected cutter stock or finger bar, for the purposes specified.

Seventh, hinging the finger bar in a grass harvesting machine to a vibrating drag bar, or equivalent device, when said drag bar or equivalent device is used for the purpose of sustaining and supporting the cutting apparatus to the right of the path of the inner main wheel of the machine, and of allowing it to conform freely to the uneven surface of the ground while the machine is in operation.

No. 1,282.—JOHN E. BROWN, of Woonsocket, and STEPHEN S. BARTLETT, of Providence, R. I., assignors to JOHN E. BROWN, STEPHEN S. BARTLETT, aforesaid, and THOMAS H. DODGE, of Washington, D. C.—*Improvement in Grain and Grass Harvesters.*—Patented January 2, 1855; reissued January 1, 1861; again reissued February 25, 1862.

Claim.—First, the combination of a floating, folding finger bar with the frame of a grass harvesting machine, whereby, when the machine is in operation, the cutting apparatus is left free to conform to the inequalities of the ground without affecting the motion of the main frame, and is also capable of being raised and turned or folded up so as to facilitate the passage of the machine from place to place or over fields of cut grass.

Second, the arrangement of a floating folding finger bar with the frame of a grass harvesting machine in such a manner that the attendant can freely approach said finger bar from the rear and turn up the outer end thereof with facility to pass stumps, stones, or through gates without tipping up or raising the carriage, while the main weight of the finger bar is allowed to rest on the ground at the side of the machine, for the purposes stated.

Third, the combination of a stop V, or any equivalent device, for the purpose stated, with the heel of a floating, folding finger bar and the frame of a grass harvester.

No. 1,283.—JOHN E. BROWN, of Woonsocket, and STEPHEN S. BARTLETT, of Providence, R. I., assignors to JOHN E. BROWN, STEPHEN S. BARTLETT, aforesaid, and THOMAS H. DODGE, of Washington, D. C.—*Improvement in Grain and Grass Harvesters.*—Patented January 2, 1855; reissued January 1, 1861; again reissued February 25, 1862.

Claim.—First, the combination of the following elements in a grass harvesting machine, viz., a main frame, two supporting wheels to sustain said frame laterally and at the proper height above the ground, a rigid tongue to draw and steady the machine by, and a floating finger bar, for the purposes stated.

Second, so combining in a grass harvester a floating finger bar, a frame to support the driver, and the tongue or draft beam by which the machine is drawn forward, as that the finger bar which supports the cutting apparatus can rise and fall freely at either or both ends without affecting the motion of said frame or tongue.

Third, the combination and arrangement in a grass harvesting machine of a frame to carry the driver, two wheels to support said frame, one at each side thereof, a tongue to draw the machine by, and a double-jointed finger bar attachment, substantially as and for the purposes stated.

Fourth, combining the floating finger bar with the frame of a grass harvesting machine so

Claim.—Adding to common salt, after it has been dried, a small quantity of

Fourth, combining the floating finger bar with the frame of a grass harvesting machine so that said floating finger bar shall project entirely from the right side of the machine, substantially as and for the purposes stated.

No. 1,284.—NEW YORK WIRE RAILING COMPANY, of New York, N. Y., assignees of T. B. BLEECKER, of New York, N. Y.—*Improved Mode of Constructing Folding Hinge Bedstead.*—Patented April 17, 1847; reissued July 24, 1860, and extended; again reissued March 4, 8621.

Claim.—First, the folding frame hinged in the centre and setting within the corner posts, when such frame is connected directly to the posts themselves by journals or bolts, on which the parts turn in folding or unfolding, as set forth.

Second, the hook-shaped ends to the side rails of the frame hinged in the centre-taking bolts or journals attached to the post and forming hinges for the same, or for allowing said frame to be disconnected from the posts, as specified.

Third, in a bedstead wherein a frame is employed that is hinged to fold as set forth, and hinged at its ends directly to the posts, the use of a fastening or brace that retains the hinged frame and posts in their proper relative positions, as set forth.

Fourth, in a bedstead where the head and foot guards are constructed substantially as specified, and the bottom is made of a frame hinged to fold in the centre as set forth, locating the journal or bolt *b* on the post, so that the bedstead, when folded, will stand upright, as specified.

No. 1,285.—S. H. MILLER, of Hanoverton, Ohio.—*Improvement in Governors for Steam Engines.*—Patented September 11, 1860; reissued March 4, 1862.

Claim.—The employment, in combination with the described system and arrangement of sliding sleeve B, arms E E′, balls F F′, and links D D′ of a spring or springs, applied to operate substantially as and for the purpose specified.

No. 1,286.—CHARLES METTAM, of New York, N. Y., assignee of SAMUEL NOWLAN, of the same place.—*Improvement in Galvanic Soles.*—Patented June 18, 1861; reissued March 11, 18 2.

Claim.—First, the formation of articulated electro-voltaic plate work in sections, as described, throughout the whole or major portion of its area so as to give to the same a general pliability, and formed of copper and zinc plates, or their equivalents, essentially as described, and the several sections of negative and positive plates being united in separate relations to their contiguous sections by a flexible insulating strip or strips, substantially as specified.

Second, uniting the several sections of articulated electro-voltaic plate work by means of eyelets or their equivalents, substantially as set forth.

Third, the employment of a skeleton flexible insulator for uniting the several sections of articulated galvano-electric plate work.

No. 1,287.—JESSE A. CRANDALL, of New York, N. Y.—*Improved Rocking Toy.*—Patented May 17, 1859; reissued March 11, 1862.

Claim.—The combination of the body A, whether made in the form of a hobby horse or of a toy of other description, of the class described, with the base B B, and a spring or springs C, for producing a rocking movement, as and for the purpose described.

No. 1,288.—THOMAS J. MAYALL, of Roxbury, Mass., assignor to JOHN H. CHEEVER, of New York, N. Y.—*Improved Composition for the Manufacture of Emery Sticks and Wheels.*—Patented May 17, 1859; reissued March 18, 1862.

Claim.—First, the production of a new compound or composition of matter applicable to the manufacture of sticks, wheels, or other tools for grinding, cutting, or polishing metals, glass, or other hard substances, by combining gutta-percha and sulphur with powdered emery.

Second, the production of a new compound or composition of matter applicable to the manufacture of sticks, wheels, or other tools for polishing, grinding, or cutting metals, glass, or other hard substances, by combining gutta-percha and sulphur with powdered emery and olive oil, or its equivalent.

No. 1,289.—THOMAS J. MAYALL, of Roxbury, Mass., assignor to JOHN H. CHEEVER, of New York, N. Y.—*Improved Composition for the Manufacture of Emery Sticks and Wheels.*—Patented May 17, 1859; reissued March 18, 1862.

Claim.—First, as new articles of manufacture, suitable to grinding and polishing metals, glass, &c., sticks and other tools made of a flexible India-rubber or gutta-percha compound, having emery or other gritty substance incorporated with it.

Second, as a new composition of matter, India-rubber or gutta-percha combined with sulphur and powdered emery in the proportion and manner described, or in such other proportion and manner as will produce a flexible compound by vulcanization.

No. 1,290.—THOMAS SPENCER, of Syracuse, N. Y.—*Improvement in the Manufacture of Common Salt.*—Patented May 29, 1860; reissued March 18, 1862.

Claim.—Adding to common salt, after it has been drained and in a state of crystallization, the carbonate or bicarbonate of soda so as to unite the same with the impurities, as and for the purposes set forth.

No. 1,291.—THOMAS SPENCER, of Syracuse, N. Y.—*Improvement in the Manufacture of Common Salt.*—Patented May 29, 1860; reissued March 18, 1862.

Claim.—The admixture of sulphate of soda, or its equivalent, as set forth, with common salt in a crystallized state after being removed from the impure bath, or "mother liquor," for the purposes specified.

No. 1,292.—CHARLES T. EAMES, of Milford, Mass.—*Improvement in Boot-Trees.*—Patented May 27, 1856; reissued March 25, 1862.

Claim.—A boot-tree distended by means of a single cam or wedge attached to a stretching rod D at its lower end and traversing upon an inclined plane located in the back A, at or near its lower end, the same operating substantially in the manner set forth.

No. 1,293.—AUGUSTUS P. GRIFFING, of East Cambridge, Mass.—*Improved Inkstand.*—Patented February 4, 1862; reissued March 25, 1862.

Claim.—The inkstand the caps *b f* of which are made to operate substantially in the manner specified.

No. 1,294.—D. B. NEAL and G. E. HOUSE, of Mount Gilead, Ohio, assignees of D. B. NEAL, H. C. EMERY, and G. E. HOUSE, of the same place.—*Improvement in Apparatus for Evaporating Saccharine Juices.*—Patented February 21, 1860; reissued March 25, 1862.

Claim.—First, leading a current of cold air under the bottom of the sugar pan, for the purpose of facilitating the removal of the scum, substantially in the manner described.

Second, cooling that portion of the pan from which the molasses is about to be withdrawn without interrupting the boiling of the crude juice in the other portions of the pan, substantially in the manner described.

No. 1,295.—C. S. BUCHANAN, of New York, N. Y., assignee of J. T. COUPIER and M. A. C. MELLIER, of Paris, France.—*Improvement in the Preparation of Paper Stuff.*—Patented August 2, 1853; antedated May 7, 1851; reissued March 25, 186[illegible]

Claim.—First, treating straw with pure caustic alkali, (previo[illegible]freed from lime,) for loosening the color preparatory to the bleaching process, substantial[illegible] manner and for the purpose set forth.

Second, the circulation of the caustic fluid through the stock so as to avail ourselves of repeated chemical action on the fibrous material, substantially in the manner and for the purpose set forth.

Third, in combination with the alkaline treatment of straw, as described, the use of the hypochlorites as described and for the purpose set forth.

No. 1,296.—MOSES MARSHALL, of Lowell, Mass., assignor to S. S. BUCKLIN, of Brookline, Mass.—*Improvement in Pegging Machines.*—Patented November 5, 1861; reissued March 25, 1862.

Claim.—A feeding point so arranged and operated as to enter the hole previously made by the awl, and to move the machine along for the purpose set forth.

No. 1,297.—THE LIQUID QUARTZ COMPANY, of New York, N. Y., assignees of G. E. VAN DERBERGH, of Mamaroneck, N. Y.—*Improvement in Preparation of Soluble Silicates.*—Patented May 29, 1860; reissued April 1, 1862.

Claim.—Reducing any silicious and alkaline composition or substance to a liquid state, by bringing it into direct contact with superheated steam, while enclosed within a suitable vessel, substantially as set forth.

No. 1,298.—A. G. BEVIN, of Chatham, Conn.—*Improved Mode of Attaching Sleigh Bells to Straps.*—Patented July 22, 1856; reissued April 8, 1862.

Claim.—Securing sleigh bells to straps by means of staples, rivets, bolts, or their equivalent, passing through the straps and belts, substantially as described.

No. 1,299.—J. C. BIRDSELL, of West Henrietta, N. Y.—*Improvement in Machinery for Hulling and Threshing Clover.*—Patented May 18, 1858; reissued April 8, 1862.

Claim.—The arranging and combining in one machine the cylinder which threshes the balls and seed from the straw or stalks, and the cylinder which hulls the seed, so that the balls and seed threshed may be hulled before it (the seed) passes out of the machine.

And in combination with the threshing and hulling cylinders above claimed, the bolting or screening and conveying apparatus, which separates the balls and seed from the straw or stalks and delivers them to the hulling cylinder.

And in combination with the threshing and hulling cylinders, the screening and fanning apparatus which separates the hulls or balls and cleans the seed after it leaves the hulling cylinder.

No. 1,300.—HENRY EDDY, of North Bridgewater, Mass.—*Improvement in Cribs for Horses.*—Patented January 6, 1857; reissued April 8, 1862.

Claim.—First, the application and use of the inclined planes H H, with the vertical opening I between them, in combination with the sides of the crib E F, substantially as specified and for the purposes set forth.

Second, the space *g h k*, partially enclosed by enclined planes H A, with the opening I, substantially as specified.

Third, the ventilator *o*, in combination with the planes H H, substantially as described.

Fourth, the cap K, when applied to the crib D, substantially as described and for the purpose set forth.

No. 1,301.—HENRY L. RANDALL, of Roxbury, Conn., assignor to ISRAEL D. CONDIT, of Milburn, N. J.—*Improvement in Machines for Felting and Sizing Hat Bodies.*—Patented April 21, 1857; reissued April 15, 1862.

Claim.—A concave bed for the roll of hat bodies to rest and turn in without changing place while being felted, substantially as and for the purpose specified.

Also, in combination with such a concave bed, the mode of operation of the felting instrument, substantially as and for the purpose specified.

Also, in combination with such a concave bed, and with the felting instrument, or the equivalent thereof, the means described, or the equivalent thereof, for partially resisting the rotation of the roll of hat bodies in the said bed, substantially as and for the purpose specified.

Also, in combination with the concave bed and the felter, or their equivalents, the mechanism, or the equivalent thereof, for varying the degree of pressure on the roll, and for free access to the bed for putting in or taking out a roll of hat bodies, as set forth.

No. 1,302.—CLEMENT RUSSELL, of Massillon, Ohio.—*Improvement in Double-geared Horse Powers.*—Patented May 1, 1855; reissued April 15, 1862.

Claim.—In connexion with double-geared horse powers, the combined use of a centre pin and moving block for allowing the drive wheel to adjust itself to the pinions with which it works, substantially as described.

No. 1,303.—DENNIS G. LITTLEFIELD, of Albany, N. Y.—*Improvement in Hot-air Furnaces.*—Patented October 9, 1860, antedated July 3, 1860; reissued April 22, 1862.

Claim.—First, the combination of the cold-air channel H, the perforations S S S S, the register S′, and the damper R, as described.

Second, combining in hot-air furnaces the shell or covering L, the register S′, for opening and closing the top of the shell, as set forth, the perforations S S S S, opposite or near the fire pot, and the cold-air channel H, substantially as described.

No. 1,304.—JOHN E. EMERSON, of Trenton, N. J.—*Improvement in the Mode of Fastening Tools to their Handles.*—Patented March 29, 1859; reissued April 29, 1862.

Claim.—First, the use of picks, axes, or other analogous tools without eyes therein, when the same are fastened to a handle by means of a stirrup, an iron heading, a gib and key or wedge.

Second, the iron heading of a handle, in combination with the transverse key or wedge, and the eyeless pick, axe, or other analogous tool.

Third, the key or wedge when the same is used transversely to the tool for attaching picks, axes, or other analogous tools to handles.

No. 1,305.—SAMUEL S. WHITE, of Philadelphia, Pa.—*Improvement in the Manufacture of Artificial Teeth.*—Patented January 1, 1862; reissued April 29, 1862.

Claim.—The manufacture of mineral teeth with pins having heads *d d* at their outer ends, substantially as specified.

No. 1,306.—GAIL BORDEN, jr., of Amenia, N. Y.—*Improvement in Concentrating and Preserving Sweet Milk.*—Patented August 19, 1856; reissued May 13, 1862.

Claim.—First, concentrating sweet milk by evaporation in vacuo, substantially in the manner and for the purpose set forth.

Second, in the process of concentrating sweet milk in vacuo, the preparatory scalding of the milk by heating it to a temperature of from 150° to 200° Fah., substantially in the manner and for the purpose described.

No. 1,307.—DANIEL HOLMES, of Chelsea, Mass., assignee of JOSEPH HARRIS, jr., and DANIEL HOLBIES, of Roxbury, Mass.—*Improved Carpet-beating Machine.*—Patented February 23, 1858; reissued May 13, 1862.

Claim.—First, the use of the revolving endless flexible beaters *a a g g*, or their equivalents, when used and operated substantially as described for the purposes specified.

Second, the combination of a set of vibrating flexible whips, or their equivalents, with a set or sets of revolving endless whips, substantially as described, for the purpose specified.

Third, the use of an elastic cushion L placed in front of the carpet to sustain the shock of the whips, substantially as set forth.

No. 1,308.—LEWIS HORNING, of Montgomery Co., Pa., assignee of J. Y. HUMPHREY, of Philadelphia, Pa.—*For Mica Chimneys for Lamps.*—Patented July 17, 1860; reissued May 13, 1862.

Claim.—The construction and use of lamp-chimneys made mainly of mica, when the upper end is contracted and made smaller than the lower or middle portions thereof, substantially in the manner and for the purpose described.

Also, binding the mica chimney of a lamp with rings of metal, substantially in the manner and for the purpose described.

No. 1,309.—H. D. SNOW, of Rochester, N. Y.—*Improvement in Governor Valves.*—Patented October 11, 1859; reissued May 13, 1862.

Claim.—Constructing steam-governors substantially as set forth, so as that the downward movement of the balls when they drop below the point, affording a full opening to the valve, shall tend to close it.

No. 1,310.—R. B. GOODYEAR, of Elkton, Md., formerly of Philadelphia, Pa., assignee of A. BOWIE and CHARLES CARR, assignees of the said R. B. GOODYEAR.—*Improvement in Apparatus for Operating Shuttle-Boxes of Looms.*—Patented March 13, 1849; antedated September 13, 1848; reissued June 14, 1853; again reissued May 20, 1862.

Claim.—The employment, for the purpose of weaving, of an index-plate having movable and adjustable pins projecting at different distances from the face of said plate, in combination with the shoe H, or its equivalent, for the purpose of raising and falling the shuttle-boxes to correspond with the pattern desired to be formed, the whole constructed and arranged in the manner described.

No. 1,311.—JAMES B. FLOYD, of New York, N. Y.—*Improvement in Burglar-Proof Safes.*—Patented October 16, 1860; reissued May 27, 1862.

Claim.—The use or introduction of the crystallized or cast franklinite, or similarly constituted metal by whatever name known, in the construction of safes, or parts thereof, to render such structures proof against the use of all kinds of known cutting tools.

No. 1,312.—JOHN C. MORRIS, of Cincinnati, Ohio.—*Improvement in Wood-bending Machines.*—Patented March 11, 1856; reissued May 27, 1862.

Claim.—First, a wood-bending form, to which timbers are made to conform by bending them from the centre or inner end of the desired curve outward, when used in combination with abutments or clamps to prevent or regulate end expansion, and levers or handles, or their equivalents, to guide the bending, substantially as described.

Second, a stationary or poised wood-bending form, in combination with the cords, levers, and drum, or their equivalents, and the eccentric clamp, or its equivalent, in the manner and for the purposes set forth.

Third, in combination with the stationary form, levers, and abutments, the employment of hooks and pins, or their equivalents, that shall embrace the ends of the wood to restrain the wood in shape, and permit the removal of the abutments, after the completion of each operation.

No. 1,313.—JACOB SWARTZ, of Buffalo, N. Y.—*Improvement in Harvesters.*—Patented November 14, 1854; reissued June 5, 1860; again reissued June 3, 1862.

Claim.—In combination with the main frame of a harvester, and a short, laterally-projecting finger bar, carrying cutters reciprocating in a straight line, a shoe whose front end is sloped forward and upward above the points of the fingers, substantially as shown, through which said finger bar receives all its connexion with the main frame of the machine, when said shoe is secured to the main frame through the medium of a hinge connexion.

No. 1,314.—JACOB SWARTZ, of Buffalo, N. Y.—*Improvement in Harvesters.*—Patented November 14, 1854; reissued June 5, 1860; again reissued June 3, 1862.

Claim.—First, in combination with the main frame of a harvester and the finger bar G and shoe F, or their equivalents, the coupling arm E, or an equivalent thereof, which, when drawn forward by said main frame, will draw forward said finger bar and vary the longitudinal distance of its heel from the frame, when raised and lowered in respect thereto, substantially as described.

Second, making that end of the coupling arm E, or its equivalent, which is connected with hangers, C and D, with a front and rear branch, for the purpose specified.

Third, making the vibrating end of the coupling arm E, or its equivalent, with a front and rear branch, for the purposes specified.

Fourth, making the central portion of the coupling arm E, or its equivalent, of less width

than the front of the front branch to the rear of the rear branch of its inner end where the hinge pins pass through.

Fifth, making the central portion of the coupling arm E, or its equivalent, of less width than from the front of the front branch to the rear of the rear branch of its vibrating end, where the hinge pins pass through.

Sixth, making the branch *b* of the coupling arm E, or its equivalent, to extend further back than its branch *d*.

Seventh, making the branch *c* of the coupling arm E, or its equivalent, to extend further forward than branch *a*.

Eighth, hinging branches *a* and *b* of the coupling arm E, or its equivalent, each to a different member of the machine.

Ninth, causing branch *c* of the coupling arm E, or its equivalent, to occupy one cavity in the shoe F, or its equivalent, and branch *d* to occupy a different cavity therein.

Tenth, placing the branch *d*, of the coupling arm E, or its equivalent, over the heel of the finger bar and branch *c*, in front of and of a corresponding height with branch *d*.

No. 1,315.—JACOB SWARTZ, of Buffalo, N. Y.—*Improvement in Harvesters.*—Patented November 14, 1854; reissued June 5, 1860; again reissued June 3, 1862.

Claim.—First, the combination with the main frame of a harvester of the coupling arm E, finger bar G, and cutter bar *n*, substantially in the manner described.

Second, the combination with the main frame of a harvester of the coupling arm E, finger bar G, cutter bar *n*, and pitman *p*, or their equivalents, substantially in the manner described, whereby the relative positions of the cutters and fingers to each other are not materially varied, when raised or lowered in respect to said main frame.

Third, limiting the distance which the inner end of the above-described cutting apparatus will vibrate from, and toward the main frame to which it is connected by the upright post Q, arm R, hinge pins *a'* and *b'*, vertical slot *c'*, and set screw *d'*, or their equivalents, substantially as described.

Fourth, so connecting said cutting apparatus to the main frame of the machine by the post Q, arm R, hinge pins *a'* and *b'*, vertical slot *c'*, and set screws *d'*, or their equivalents, that it can be retained at various heights above the ground, substantially as described.

No. 1,316.—JOHN H. SYNDER, of Troy, N. Y.—*Improvement in Manufacturing Railroad Chairs.*—Patented July 13, 1858; reissued June 3, 1862.

Claim.—Making the continuous jaw or lip of railroad chairs by rolling and forming the same by means of suitably shaped rollers, mounted and running in conjunction with each other, substantially as described and set forth.

Also, the forming of continuous jaws or lips of railroad chairs by rolling into the solid iron of the flange, on the blank bar of which the said lips are composed, and which flange for said jaw or lips is raised upon a blank bar as aforesaid, by means of said rollers, described and set forth, or by means of any rollers substantially the same.

No. 1,317.—G. G. LOBDELL, of Wilmington, Del.—*Improvement in Cast Metal Car Wheels.*—Patented April 15, 1862; reissued June 17, 1862.

Claim.—First, a hollow cast metal tire or hollow rim B, provided internally with radial braces *f*, connected at their ends respectively with the inner and outer peripheries of the tire, and without being in contact with its sides, substantially as and for the purpose set forth.

Second, securing the tire or rim B to the rim *c* of the wheel A, by means of the bolts *g* passing through the rim *c*, and the inner periphery of the tire or rim B, and having holes *j* made in the sides of the tire or rim B to turn the nuts *i*, as set forth.

Third, counterbalancing the wheel by pouring melted lead or other suitable metal into the chamber *e*, when said metal counterbalance is used or employed with the braces *f*, arranged as set forth.

Fourth, the combination of the hollow wheel A and the hollow tire B, when both are constructed, arranged, and secured together, as and for the purpose set forth.

No. 1,318.—HENRY A. BURR, of New York, N. Y., assignee through mesne assignments of H. A. WELLS, (deceased.)—*Improvement in Manufacturing Hat Bodies.*—Patented April 25, 1846; reissued October 7, 1856; extended and again reissued April 25, 1860; and again reissued June 17, 1862.

Claim.—First, in depositing fur in a conical bat of the described varying thickness.

Second, in holding the bat by pressure, so as to preserve the disposition of the fur and permit the percolation of water; and

Third, in saturating the bat with water while the disposition of the fibres is preserved. These three steps being performed in the order and substantially in the manner specified.

No. 1,319.—W. W. SHAW, of Troy, N. Y., assignor through mesne assignments, to L. L. TOWER, of Cambridge, Mass.—*For Rubber Head for Lead Pencils, &c.*—Patented April 5, 1859; reissued June 24, 1862.

Claim.—The combination of a lead pencil and an elastic rubber ferrule or head, made so as to encompass the cylindrical surface of the pencil or a tenon therefrom, substantially in the manner as specified.

Also, as a new manufacture, an elastic erasive pencil head made substantially as described.

No. 1,320.—S. L. AVERY, of Norwich, N. Y.—*Improvement in Water Elevators.*—Patented May 8, 1860; reissued July 1, 1862.

Claim.—Coupling a crank to any windlass shaft in such a manner that the said crank can be instantly uncoupled from said shaft, and then be used as a brake lever, for the purpose of checking or controlling the reverse movements of the said windlass shaft, all substantially as set forth.

Also, arranging a crank with a windlass shaft, a ratchet wheel and pawl, in such a manner that the instant the said crank is uncoupled from the windlass shaft, a further action upon said crank will relieve the ratchet wheel from the action of the pall, and also cause a friction brake to so act upon the windlass shaft as to check or control its reverse movements, all substantially as set forth.

No. 1,321.—J. R. BAYLIS, of Baltimore, Md.—*Improved Double Cone Marine Propellers.*—Patented December 10, 1861; reissued July 1, 1862.

Claim.—The construction of a double or single cone propeller, having its oars or blades constructed, and when arranged relatively to the hub or axis, substantially as and for the purpose described.

No. 1,322.—A. W. GRAY, of Middletown, Vt.—*Improvement in Horse Powers.*—Patented September 9, 1856; reissued July 1, 1861.

Claim.—Constructing the links which compose the endless chains of corrugated and bent sheet metal, so that the corrugations shall serve both as hinges for connecting the links, and as cogs to gear into the cog wheels of the driving shaft, substantially as specified.

Also, the friction rollers *a a* only partially perforated for the reception of their bearings *b b*, which have no shoulders, arranged and operating substantially as and for the purpose set forth.

Also, the method of forming the tenons on the ends of the cogs, to enter the mortises of the sheet metal links by means of the simple saw kerfs, substantially as specified.

No. 1,323.—N. K. WADE and JOS. KAYE, of Pittsburg, Pa.—*Improvement in Car Wheels.*—Patented September 4, 1860; reissued July 8, 1862.

Claim.—The use in car wheels having cast-iron rim and hub, of curved or bent spokes or arms of wrought iron, or other flexible material, so arranged and set relatively to the hub and rim as to brace the rim in a plane parallel to its axis, substantially as described.

No. 1,324.—J. J. ECKEL, of New York, N. Y., assignee of A. RANDEL, of the same place.—*Improved Oil Presses.*—Patented March 8, 1862; reissued July 22, 1862.

Claim.—The hollow plunger B I, solid curb C, with a perforated cylinder D placed within it, and so arranged as to allow vertical escape passages between them for the exit of the oil or grease, and the perforated central discharge tube E, in combination with the perforated horizontal plates F G and H, arranged as shown, or in any convenient way to admit of lateral escape passages for the oil or grease between the central tube E and the perforated cylinder D, as set forth.

Further, the bed A, hollow plunger B I, solid ribbed curb C surrounded by bands C' shrunk upon its periphery, perforated cylinder D, perforated central discharge tube E supporting tube E', perforated plates F, G, and H, and bars *c e g*, all constructed, combined, and arranged in the manner and for the purposes hereinbefore explained.

No. 1,325.—RICHARD MONTGOMERY, of New York, N. Y.—*Improvement in Iron Cars.*—Patented August 7, 1860; reissued July 22, 1862.

Claim.—First, the use of the corrugated iron beams, constructed as described when applied to railway cars and other vehicles, in the manner and for the purposes set forth.

Second, the combination of the curved top pieces B, with the side or base pieces A, and coupling pieces H and G, arranged and operating substantially as described.

Third, the combination of the cross pieces C, with the arched supports D, substantially as and for the purposes set forth.

Fourth, the corrugated covering F, arranged as described in combination with the arched top pieces B.

Fifth, the coupling pieces H and G, severally, and their application jointly or severally, in the manner and for the purposes set forth.

No. 1,326.—N. K. WADE and JOSEPH KAYE, of Pittsburg, Pa.—*Improvement in Metallic Wheels for Fly Wheels, &c.*—Patented September 4, 1860; reissued July 22, 1862.

Claim.—Constructing wheels with rim and hub, or both, of metal cast on curved spokes or arms of wrought iron or other flexible material, substantially as and for the purpose hereinbefore set forth.

No. 1,327.—G. P. Cox, of Malden, Mass., administrator of S. A. Cox, (deceased,) and assignee by mesne assignments of said decedent.—*Improvement in Machine for Bending the Lip of Wrought-Iron Railroad Chairs.*—Patented August 8, 1849; reissued July 14, 1857; again reissued August 12, 1862.

Claim.—First, a suitable support for a chair blank, in combination with bending levers, or a bending apparatus and a former, or their equivalents, acting in combination, substantially as specified hereinbefore.

Second, a drop hammer, or its equivalent, for the purpose set forth, in combination with the bending levers, a former, and a suitable support for the chair blank, or their equivalents, for the purposes set forth, and acting in combination, substantially in the manner hereinbefore set forth.

Third, the use of the discharging lever K, or equivalent therefor, in combination with the former, for the purpose of forcing said former from the chair.

No. 1,328.—David Landis, of Lancaster, Pa.—*Improvement in Screens for Flour Bolts.*—Patented October 23, 1860; reissued August 19, 1862.

Claim.—First, the rotating cylinder D and screen E, the latter being placed within the former, and both arranged essentially as shown, to operate as and for the purpose set forth.

Second, the metal lining a^* b^*, within the bolt chest, for the purpose herein specified.

Third, the combination of the cylinder D, screen E, and metal bolt chest lining a^* b^*, as and for the purpose set forth.

No. 1,329.—Adam Lebküoner, of Belleville, Ill.—*Improvement in Lubricating Compounds.*—Patented June 25, 1861; reissued August 19, 1862.

Claim.—The use for lubricating purposes of rosin oil, muriate or chloride of zinc, lime and water combined together, as above described.

No. 1,330.—G. W. Scollay, of St. Louis, Mo.—*Improvement in Burial Cases.*—Patented March 18, 1862; reissued August 19, 1862.

Claim.—First, controlling, disinfecting, and deodorizing the gases as they escape from the coffin, by making a tube or valve therein and combining and confining with or over said hole or valve the disinfecting and deodorizing material in some part of the coffin, which is to be otherwise air-tight.

Second, making a chamber in combination with the coffin, for the purpose of holding the deodorizing and disinfecting material, and causing the gases to pass through said chamber on their way out of the coffin.

Third, the use of the valve *a*, in combination with the disinfecting and deodorizing chambers.

No. 1,331.—Chauncey Thomas and D. P. Nichols, of Roxbury, Mass., assignees of Chauncey Thomas, aforesaid.—*Improvement in Carriage Props.*—Patented September 22, 1857; reissued August 26, 1862.

Claim.—The improved carriage prop as constructed with a screw or a loose shoulder cap D, combined with a joint bar standard A, and arranged between the leather L and the joint bars G H, all placed on the standard, or the latter passing through them and secured in position by the nut I, substantially as described.

No. 1,332.—Dennis G. Littlefield, of Albany, N. Y.—*Improvement in Stoves.*—Patented January 24, 1854; reissued November 19, 1861; again reissued August 26, 1862.

Claim.—The illuminated exterior wall or cylinder M, with openings *f* therein glazed with isinglass, or any transparent substance, or any equivalent therefor, in combination with a coal supply chamber and an intermediate chamber G, wherein gas is consumed at or around the fire pot, or any appendage thereof, substantially as and for the purpose herein described and set forth.

No. 1,333.—Dennis G. Littlefield, of Albany, N. Y.—*Improvement in Stoves.*—Patented January 24, 1854; reissued November 19, 1861; again reissued August 26, 1862.

Claim.—The employment of a fire pot having a vertical fire grate around the same, forming a downward continuation of a coal supply pot, in combination with a gas-consuming chamber between the outer case and the connected fire and coal supply pot, substantially as and for the purposes as herein described and set forth.

No. 1,334.—Dennis G. Littlefield, of Albany, N. Y.—*Improvement in Stoves.*—Patented January 24, 1854; reissued November 19, 1861; again reissued August 26, 1862.

Claim.—An organization which will permit the gases of the supply coal and the gases of the incandescent coal to burn laterally below and outside of the coal-supply chamber, and entirely down to the grate, and thereafter circulate the spent gases, or a portion of them, over the top of the coal-supply chamber, and finally discharge them through a flue leading outside the room in which the stove is situated.

No. 1,335.—Dennis G. Littlefield, of Albany, N. Y.—*Improvement in Stoves.*—Patented January 24, 1854; reissued November 19, 1861; again reissued August 26, 1862.

Claim.—The combination of the fire pot E with the coal-supply cylinder F, immersed within the outer cylinder M, which forms the chambers G and G′, substantially as and for the purpose herein described.

No. 1,336.—Lewis Moore, of Ypsilanti, Mich., (formerly of Bart, Pa.)—*Improvement in Seed Planters.*—Patented July 2, 1850; reissued October 12, 1852; again reissued August 26, 1862.

Claim.—First, a seeding slide having apertures with sides oblique to the sides of corresponding apertures in the hopper bottom or plate *s*, when combined with any suitable device to impart a reciprocating motion to the said slide, substantially as described.

Second, in combination with a hopper or seed-box having a number of apertures for the discharge of seed, a perforated seeding slide having a reciprocating motion transverse to the motion of the machine, and adjustable in extent, for the purpose of varying the quantity of seed sown.

Third, the combination of the perforated vibrating lever *p* and pivoted rod *m* with a cam *f* and seeding slide *j*, to vary the motion of the said slide, substantially as and for the purposes explained.

Fourth, raising or lowering the drill teeth or hoes simultaneously, by means of chains *a′*, or their equivalent, attached to the rear edge of a flat bar or board X, hinged by its front edge to the frame, and provided with a lever *y*, projecting backward from it, all substantially as herein shown and described.

Fifth, the combination of the hook or catch *b′*, flat bar or board X, and lever *y*, all constructed, arranged, and employed in the manner and for the purposes set forth.

Sixth, supporting the hopper or seed-box upon the frame of the machine by means of brackets *b2* *b2*, straddling the beam *a2*, so as to secure the hopper in position without fastenings, and permit its ready removal.

Seventh, suspending the seeding slide beneath the hopper by means of loops *w*, placed beneath the apertures *h i* in the hopper bottom, substantially as and for the purposes set forth.

No. 1,337.—M. Easterbrook, J. M. Wood, and E. A. Brownson, of Geneva, N. Y., assignees of said Easterbrook and Wood.—*Improvement in Machines for Peeling Willows.*—Patented January 21, 1862; reissued September 2, 1862.

Claim.—First, the employment or use in willow-peeling machines of two presser wheels D and F, constructed and operating substantially as described, so as to produce a direct central pressure upon three sides of the passing willow.

Second, the projections *m*, attached to yielding slides *i*, which are fitted in a plate L, between the bars K, and arranged in relation with the wheels D and F, to operate as and for the purpose specified.

Third, the combination of the presser wheels D and F, yielding scrapers *m*, revolving brushes M, and the discharging rollers N, arranged as and for the purposes specified.

No. 1,338.—Henry Jenkins, of Brooklyn, N. Y., (formerly of Pottsville, Pa.)—*Improvement in Wire Fences.*—Patented February 13, 1849; reissued September 3, 1862.

Claim.—First, an iron fence or other article formed by the combination of woven wires or rods, with grooved bars surrounding the same and receiving the ends of the wires, in the manner specified and for the purposes set forth.

Second, forming the surrounding metallic frame of a woven wrought-iron panel by the employment of two bars attached to each other, and having between them the ends of the wires or rods forming the wrought-iron work, substantially as specified.

Third, crimping straight wires or rods in opposite directions, at the required distances apart, and weaving said wires or rods together to form meshes as set forth, whereby the general straight form of the wire is maintained, except at the points where the wires cross, as specified.

Fourth, crimping wires or rods at different or irregular distances along their lengths, in order that said wires or rods, when woven together, shall form open iron-work with meshes of different shapes, substantially as set forth.

Fifth, wires or rods crimped in opposite directions, and formed with bends between the crimps at right angles to them, and woven together as specified, whereby the crimps set into each other at the points of intersection, and the aforesaid bends regulate the shape of the meshes, as set forth.

Sixth, in combination with the iron-work formed by wires or rods crimped and woven together, as set forth, the rods twisted together, as specified.

No. 1,339.—J. M. Allen, of Fredericktown, Ohio, assignee of Newman Silverthorn, of Prescott, Wis.—*Improved Boot and Shoe Tip.*—Patented November 29, 1859; reissued September 3, 1862.

Claim.—First, a tip, as an article of manufacture, formed into shape in such a manner as to allow of its being applied and fastened to the toe part of shoes or boots by sewing or

pegging it between the upper and the sole, substantially as hereinbefore described and for the purposes set forth.

Second, a shoe or boot tip as an independent device and marketable commodity, formed of a material different from and that will present greater durability and resistance to wear than that of which the shoe or boot to which it is intended to be applied is made, such tip being made of such permanent form as to lap over and under the toe part of the upper, and whereby it may be attached to the boot or shoe by securing it at its base between the sole and upper, and without sewing it to the upper, substantially as herein described.

Third, the production, as an article of manufacture, of a shoe or boot tip made of such India-rubber or gutta-percha compound as that, when vulcanized, it shall be of a more or less soft, flexible, and elastic nature, or of any other material that will render it applicable to boots or shoes by sewing it in between the upper and the sole, substantially as herein set forth.

Fourth, the production, as an article of manufacture, of a shoe or boot tip made of such India-rubber or gutta-percha compound as that, when vulcanized, it shall be of a more or less hard or rigid nature, or of any other material that will render it applicable to boots or shoes by pegging it in between the upper and the sole, substantially as herein set forth.

No. 1,340.—S. R. ANDRES, of Troy, N. Y.—*Improvement in Articles of Food made from Beans, Peas, &c.*—Patented July 23, 1861; reissued September 9, 1862.

Claim.—The manufacture of flour, meal, grits, or grains, from beans, peas, or corn, substantially as and for the purposes described.

No. 1,341.—F. F. FOWLER, of Crane Township, Ohio.—*Improvement in Hay Elevators.*—Patented April 17, 1860; reissued September 19, 1862.

Claim.—First, in the construction of elevators for hay, the combination of the permanent pyramidal supporting frame and the revolving cross-bar and its braces with a central supporting piece, for allowing the cross-bar and its braces to turn upon the supporting frame, substantially in the manner and for the purpose described.

Second, in the construction of elevators for hay, in combination with the cross-bar, revolving upon an under supporting frame, the so arranging of the sheaves and hoisting tackle as that the weight to be raised shall be upon one end of the cross-bar, whilst the power to raise that weight is applied to the opposite end of the cross-bar, for the purpose of enabling the operator to use a small and compact structure, that may be easily transported or moved, occupying but little space, and sufficiently rigid within itself without the use of additional guys, braces, or other fastenings, as herein described and represented.

Third, in the construction of elevators for hay, two pyramidal frames, one placed upon the other, the under frame being upright and the upper one inverted, and the head-blocks or apices of both so united as that the upper frame may freely turn upon, whilst it is supported by, the lower frame, substantially in the manner described.

No. 1,342.—WM. H. HORSTMANN, of Brooklyn, N. Y.—*Improvement in Submarine Cables for Telegraphs.*—Patented September 13, 1859; reissued September 19, 1862.

Claim.—First, the combination of a conductor insulated and then covered with a fibrous coating material to form an elastic bed for the outer wires, substantially as herein described, combined with exterior wire or wires laid parallel with the conductor, as and for the purposes set forth.

Second, the link for splicing the length of the conductor, as above specified.

No. 1,343.—WM. H. HORSTMANN, of Brooklyn, N. Y.—*Improvement in Submarine Cables for Telegraphs.*—Patented September 13, 1859; reissued September 19, 1862.

Claim.—Forming the cable herein described by the apparatus substantially as herein set forth, consisting of coating reservoirs and wrapping apparatus, &c., or their equivalents.

Also, the final reservoir *m*, for coating a telegraph cable just before it enters the water or ground, substantially as and for the purpose described

Also, manufacturing the cable at the time it is laid, when found advantageous so to do, as above specified.

No. 1,344.—RICHARDSON, BARNUM & CO., of Salisbury, Conn., assignees of HENRY MOVERS, of the same place.—*Improvement in Mode of Heating Moulds.*—Patented December 3, 1861; reissued September 16, 1862.

Claim.—A hollow mould or chill when heated by the introduction of steam, hot air, blaze, or flame, for the purpose of heating the same to the proper temperature, to give a more perfect and uniform chill to the treads of cast-iron wheels, chilled tire, or other iron castings, whose surfaces require to be hardened.

No. 1,345.—CHARLES PERLEY, of New York, N. Y.—*Improvement in Compound Capstans for Ships.*—Patented August 5, 1857; reissued October 7, 1862.

Claim.—First, a removable heaver on a vertical shaft sustained and rotated from below said heaver, in combination with a second shaft and capstan or capstan head, and with gearing between the said shafts, substantially as and for the purpose specified.

Second, a capstan on a vertical shaft that can be connected to or disconnected from the shaft, in combination with a chain wheel or heaver on a separate vertical shaft, the two shafts being connected by gearing, substantially as set forth, whereby the capstan can be used separately from the heaver, or both heaver and capstan can be rotated in either direction, to take in or give out chain cable, as set forth.

Third, the adjustable bearing block *o*, in combination with the chain heaver *m*, to relieve the vertical shaft of said heaver from strain and friction that would otherwise result from the weight of the chain, or the strain on the same while the vessel is lying at anchor, as set forth.

Fourth, the combination of the power capstan *n*, coupling 9, and heaver *m*, for the purposes and as specified.

No. 1,346.—E. A. and W. TUTTLE and J. S. BAILEY, of New York, N. Y., assignees of the administrators of C. F. TUTTLE, (deceased.)—*Improvement in Hot-Air Registers.*—Patented January 23, 1849; reissued October 14, 1862.

Claim.—The application of the upright or vertical wheel G, or part or segment of a wheel, to the opening and closing of hot-air registers or ventilators; the edge or periphery of which wheel is so placed as to adapt it to be operated on by the foot if desired, substantially as set forth.

No. 1,347.—P. W. GATES, THOMAS CHALMERS, and D. R. FRASER, of Chicago, Ill., assignees through mesne assignments to WHEELER HEDGES, of the same place.—*Improvement in Evaporating Sugar Juices and Solutions by Means of Steam.*—Patented November 29, 1859; reissued October 28, 1862.

Claim.—The cooking or evaporating of sirup and sugar juices by using steam coils in such manner as to produce violent ebullition at the point where the steam first expends a portion of its heat upon the coils and sirup, and from such point have the ebullition gradually decrease in violence or to subside, so that the scum or feculent matter separated from the juices may be caused to flow toward and equably and completely deposit outside of the side margin or margins of the stream or body of juice in the pan, substantially as set forth.

No. 1,348.—P. W. GATES, THOMAS CHALMERS, and D. R. FRASER, of Chicago, Ill., assignees through mesne assignments to WHEELER HEDGES, of the same place.—*Improvement in Apparatus for Evaporting Sugar Juices and Solutions.*—Patented November 29, 1859; reissued October 28, 1862.

Claim.—First, the combination of the transverse stops F F and the pan C, with inclined sides, the stops having a narrow flow passage equal to the width of the bottom of the pan beneath them, substantially as and for the purpose set forth.

Second, the combination of the stops F F, the pan C, and defecator C′, substantially as and for the purpose set forth.

Third, the combination of the coils G G′, operating as described, or in a manner equivalent thereto, the pan C, and the fire furnace A, substantially as and for the purpose set forth.

Fourth, the combination of the deep preparatory heaters B B′, the shallow evaporating pan C D, and steam coils G G′, or equivalents thereof, and fire arch A, substantially as and for the purpose described.

Fifth, the combination of the preparatory heaters and cleaners B B′ and the defecator C′, substantially as and for the purpose described.

Sixth, the arrangement of the two sets of coils B B, two chambers B′ B′, and the receiving and exhaust steam pipes *g h*, and the sirup cocks *k k*, substantially as and for the purpose set forth.

Seventh, the combination of the evaporating pan C, steam coils G G′, or their equivalents, inclined side beaches D D, and gutters E E, substantially as and for the purpose described.

Eighth, the combination of the inclined beaches D D, and the gutters E E, substantially as and for the purpose described.

No. 1,349.—P. W. GATES, THOMAS CHALMERS, and D. R. FRASER, of Chicago, Ill., assignees through mesne assignments to WHEELER HEDGES, of the same place.—*Improved Apparatus for Defecating and Evaporating Sugar Juices.*—Patented November 29, 1859; reissued October 28, 1862.

Claim.—An evaporating pan constructed with a defecating apartment, for the purpose set forth.

No. 1,350.—P. W. GATES, THOMAS CHALMERS, and D. R. FRASER, of Chicago, Ill., assignees through mesne assignments to WHEELER HEDGES, of the same place.—*Improved Evaporating Pan for Sugar Juices and Solutions.*—Patented November 29, 1859; reissued October 28, 1862.

Claim.—An evaporating pan for sirup and sugar juices, constructed with a shallow depth by having one or both of its sides form a continuation of its bottom by rising on inclined planes, substantially as set forth.

Second, the combination of the pan, constructed as described, and a laterally located defecator, substantially as set forth.

No. 1,351.—H. S. BARTHOLOMEW, of Bristol, Conn.—*Improved Ball Brace.*—Patented May 21, 1861; reissued November 4, 1862.

Claim.—First, a breast brace A, the main portion of which is made from a rod of metal, substantially as set forth and for the purpose described.

Second, a breast brace A, the main portion of which is made from a rod of metal, substantially as described, in combination with a bit holder made separate from the rod, and suitably attached to it, substantially as and for the purpose set forth.

Third, a breast brace A, with its ball made in one piece, and secured upon it so as to maintain its proper position and to revolve, substantially as set forth.

No. 1,352.—D. H. DOTTERER, of Chicago, Ill., (formerly of Memphis, Tenn.)—*Improvement in Journal Boxes.*—Patented May 7, 1861; reissued November 4, 1862.

Claim.—First, providing in journal boxes an endless revolving band or ring M, substantially as and for the purposes described.

Second, the sheave J, and axial pin *j*, for supporting the upward thrust on the endless revolving band or ring M, within the journal box, substantially as described.

Third, the auxiliary end bearing I, for the axle journal, substantially as described.

No. 1,353.—J. C. LEFFERTS, of New York, N. Y., assignee of J. F. MARTIN and H. C. NICHOLSON, of Mount Washington, Ohio.—*Improvement in Preserve Cans.*—Patented February 15, 1859; reissued November 4, 1862.

Claim.—First, a fruit or provision can to be hermetically sealed or tightly closed, constructed of metal, lined on the inside with a vitreous body to resist the action of acids contained in the substances to be preserved.

Second, a vitreously enamelled iron provision can or jar, substantially as herein set forth.

Third, the combination of a vitreously lined metallic cover with a preserve jar, substantially as set forth.

No. 1,354.—J. L. BOOTH, of Rochester, N. Y.—*Improvement in Grain Separators.*—Patented April 8, 1851; reissued November 18, 1862.

Claim.—First, the combination of a vertical upward blast with a shaking or chaffing sieve which receives a portion of the blast, substantially as and for the purposes herein specified.

Second, the combination of the double bend (or bends) G, in the blast-tube and the open spout (or spouts) H, for the purpose specified.

Third, a valve J, or its equivalent, in combination with a vertical upward, separating blast and chaffing sieve, which receives a divided portion of the blast for the purpose specified.

No. 1,355.—JOHN MAGEE, of Chelsea, and W. J. TOWNE, of Newton, Mass., assignees of said JOHN MAGEE.—*Improvement in Ventilating Dampers for Stoves.*—Patented May 20, 1856; reissued November 18, 1862.

Claim.—The new combination of the damper *d*, (Figure 3,) smoke-pipe I, and air inlet *c*, so that the movement of the damper which diminishes the air inlet will increase the opening of the smoke passage, and that which increases the opening for the smoke will diminish the inlet for air, substantially in the manner and for the purposes above specified.

No. 1,356.—JOHN MAGEE, of Chelsea, and W. J. TOWNE, of Newton, Mass.—*Improvement in Stoves.*—Patented August 14, 1860; reissued November 18, 1862.

Claim.—The new arrangements of the smoke pipes and air valves, and mouth of the furnace or their equivalents, so that they are brought into proximity on the same side of the furnace, substantially in the manner and for the purpose hereinbefore described.

No. 1,357.—BENJAMIN CRAWFORD, of Allegheny, Pa., assignor to ENGLISH BENNETT FRISBEE, and CRAWFORD, of the same place.—*Improvement in Steam Boiler Furnaces.*—Patented January 29, 1850; reissued December 2, 1862.

Claim.—First, the injection of whirling jets of steam among the gases evolved by the fuel on the grates, for the purpose set forth.

Second, self-whirling adjutages, or their equivalents, on the pipes leading from the boiler or steam blower to proper positions for increasing the draught or promoting combustion, substantially as set forth.

Third, whirling live steam for the purpose of increasing or maintaining the draught of a steam boiler furnace, substantially as set forth, or the equivalent thereto.

Fourth, a combined stream of mingled steam and hot air introduced and forced into the ash-pit, and up through the fire of a steam boiler furnace by means of the steam boiler and hot air and steam pipes which intersect one another and terminate in a discharging nozzle within the ash-pit, substantially as set forth, or the equivalent thereto.

Fifth, live steam blowers arranged in the flues of a steam boiler for the purpose of aiding the draught and blowing out the foul matter which accumulates in the flues.

Sixth, the combination of means as set forth, for performing unitedly the several functions specified.

No. 1,358.—JOSEPH RENARD, of Lyons, France.—*Improvement in Treating Anilins to produce a Red Coloring Matter or Dye.*—Patented April 8, 1859; reissued December 9, 1862.

Claim.—The treatment of aniline in combination with a metallic salt, or the equivalent thereof, with heat, substantially as described, to produce a red in contradistinction to a purple or bluish coloring matter or dye, as set forth.

No. 1,359.—JOSEPH RENARD, of Lyons, France.—*Improved Red Dye from Aniline.*—Patented April 8, 1859; reissued December 9, 1862.

Claim.—The new substance or red dyeing matter produced by subjecting aniline and a metallic salt, or the equivalent thereof, to a high temperature, substantially as described.

No. 1,360.—N. A. RHOADS, of Waterbury, Vt.—*Improved Clothes-Wringer.*—Patented March, 11, 1862; reissued December 9, 1862.

Claim.—In a clothes-wringing machine provided with elastic rollers, the construction of either or both of such rollers, or, in other words, the arrangement of their operating surfaces, so that they may be at a greater distance asunder at their middle than at their ends, the whole being substantially in the manner and for the purpose as herein described.

Also, the arrangement and combination of the connexion and bearing bar G, with the rubber springs *g g*, the shaft H, and its cams *h h*, the whole being applied to the frame A, and its rollers D D′, substantially as described.

Also, the arrangement of the shaft L, and its arms *l l*, with reference to the rollers D D′, the frame A, and the two bars J J, or their equivalents, affixed to the said frame.

No. 1,361.—N. A. RHOADS, of Waterbury, Vt.—*Improved Clothes-Wringer.*—Patented March 11, 1862; reissued December 9, 1862.

Claim.—The connexion of each of the bars J J with the frame A A, by means of the adjustable screw M, whereby the distance of the bar J from the frame A may be increased or diminished as circumstances may require, substantially as herein set forth.

No. 1,362.—C. A. MILLER, of Philadelphia, Pa., assignee of W. S. KIRKHAM, of Branford, Conn.—*Improvement in Lock and Latches.*—Patented March 15, 1859; reissued December 9, 1862.

Claim.—The keeper D, having two inclined planes in combination with a latch so pivoted to a janus-faced lock, and so arranged in respect to the inclination of the keeper, that whether the latter be applied to a left or right-handed door casing, one or other of the said inclined planes shall, on closing the door, cause the latch to move on its pivot, and direct the outer end into or behind the keeper, as described.

No. 1,363.—HENRY DUNHAM, jr., of Abington, Mass.—*Improvement in Machine for Sewing Soles to Boots and Shoes.*—Patented September 9, 1862; reissued December 16, 1862.

Claim.—The combination of the curved and hooked needle with the last, constructed with a concave bottom, the whole being substantially as described and represented.

Also, the arrangement of the hook on the flank of the curve of the shank of the needle, as described and with respect to the awl, so as to puncture lengthwise instead of crosswise of its section a hole as made by the awl.

Also, the combination of an awl curved longitudinally with a needle having its shank curved longitudinally and provided with a hook near its point.

Also, as an improvement a sewing machine as constructed not only with its needle curved and hooked, but with the same and the rest cast off and needle-closer made to operate in curved paths, having a common cutter or axis, as described.

Also, the combination of the curved and hooked needle with the last, constructed with a concave bottom and with a chamfer, or with their mechanical equivalents, so as to form a ridge around the said bottom and inside of its outer edge, as specified.

Also, the combination of the last-holder with its carrying plate, in such manner as to enable the former to be inclined with respect to the latter, substantially in manner as set forth.

Also, the above-described arrangement of the feeding mechanism with respect to the last carrying-plate supporter M, and the sewing mechanism.

Also, a curved awl and a curved hook needle, arranged and combined with a guide-wheel G, and a last having a concave bottom, the whole being in manner substantially as specified.

No. 1,364.—B. J. LA MOTHE, of New York, N. Y., assignor of LA MOTHE LIFE PRESERVING IRON CAR COMPANY, of the same place.—*Improved Metallic Car for Railroads.*—Patented September 24, 1861; reissued December 16, 1862.

Claim.—First, the construction of the frames of railroad cars and other vehicles of tubes or of tubes and bars combined, substantially in the manner described.

Second, connecting the separate tubes of which the ribs are composed, and strengthening the corners by inserting the tubes within each other or by the insertion of additional tubes or rods, as specified.

Third, clamping the intersections by means of the sleeve sockets i fitting loosely over the bars or tubes midway between the ribs, driving tightly against them.

Fourth, the pair of rivetted or bolted clamps k, Figs. 6 and 7, securing the intersecting bars or tubes without perforating the latter with holes.

No. 1,365.—S. H. RANSOM & CO., of Albany, N. Y., assignees of ISAAC SMITH, of same place.—*Improvement in Grate for Stoves.*—Patented November 27, 1860; reissued December 16, 1862.

Claim.—Suspending the grate by cranes or hinges, substantially as set forth.

No. 1,366.—GEORGE WESTINGHOUSE, of Schenectady, N. Y.—*Improvement in Grain and Seed Winnower.*—Patented March 4, 1862; reissued December 16, 1862.

Claim.—The combination of the swinging shoe H, operating as described with the fan C, when the blast of the latter operates upon the former, in the manner and for the purpose specified.

No. 1,367.—DOUGLAS BLY, of Rochester, N. Y.—*Improved Artificial Leg.*—Patented May 17, 1859; reissued July 3, 1860; again reissued December 23, 1862.

Claim.—First, curving or deflecting the jointed extremities of the base J so as to bring their axes of motion back of their line of direction, substantially as and for the purposes set forth.

Second, the cord T and spring X, acting upon the parts D and L, substantially in the manner and for the purpose herein set forth.

Third, the combination of the India-rubber spring E with a tendon or cord in such a manner that the required effect is derived from the compression and expansion of the material, and not from its elongations and contractions, substantially as set forth.

Fourth, the axial bolts or transverse axes B C, as and for the purpose herein set forth.

Fifth, providing the ends of the cords F with the enlargements and with the conical socket fastenings G to receive the same, substantially as described, in order to apply adjusting screws for the purposes herein specified.

Sixth, the manner of constructing the bearing portions of the knee-joint consisting of the upper and lower bearing blocks N N, each of which forms a segment of a circle more or less corresponding with the axial bolt, the one being fixed in position and the other adjustable by means of the screws S S, to admit of adjusting the parts together to prevent looseness and noise, and to reduce and regulate the friction, substantially as and for the purpose herein set forth.

No. 1,368.—W. L. FISH, of Newark, N. J.—*Improved Lamp Chimney.*—Patented June 17, 1862; reissued December 23, 1862.

Claim.—The use in connexion with oil lamps of ordinary construction and operation of heating vessels containing a central flue so shaped as to form the chimney of said lamp, substantially as herein shown and described, whereby the same lamp may be used for both illuminating and heating purposes or for either.

Second, in oil lamps of ordinary construction and in connexion with the heating vessel before referred to, the use of a bulb or its equivalent device for the intermediate support of said vessel by the lamp, substantially as herein shown and described.

Third, in combination with the said heating vessel and bulb, when the latter is made of an opaque material, the use of a window or of windows made of a transparent material for the transmission of light through it, substantially as and for the purposes set forth.

EXTENSIONS.

No. 5,840.—DAVID DICK, of Meadville, Pa.—*Improvement in Presses.*—Patent dated October 10, 1848.

Claim.—The combination of two eccentric sectors having their bearings upon edges, as set forth above, with a roller placed between them whose axis has free play, all in the manner and for the purpose above set forth.

No. 5,956.—EPHRAIM MORRIS, of New York, N. Y.—*Improved Scoop and Elevator.*—Patent dated December 5, 1848.

Claim.—The application of the two-part scoop *g g*, at the lower end of the frame *a a*, conjointly with the arrangement described and shown, by which the toggle-joint arms *h h h h* close the scoops to load when acted on by the rope or chain 10, which afterward raises the scoops and load, and through which arrangement the same parts open the scoop to discharge the load, when acted on the toggle-joint arms through the shafts *b* and *e*, and drums *c c* and *d*, substantially in the manner hereinbefore described and shown.

No. 5,759.—JOSIAH KIRBY, of Cincinnati, Ohio.—*Improvement in Machines for Cutting Bungs.*—Patent dated September 12, 1848.

Claim.—The application to making plugs for covering the heads of screws, nails, bolts, &c., used in ship-building and other work, and plugs and bungs for barrels, of a cutter or hollow chisel made so as to fit into a mandrel by screw or otherwise, and bored out of the mouth at any given size, straight up far enough for the depth of a plug or bung, or to a given distance, then tapering into the centre so as to point the plug by compressing the end of the wood, a hole being bored through the whole length of the cutter so as to admit a rod through to drive out the plug when cut.

Also, the application to making plugs and bungs of the combination of the mandrel, cutter, driving-rod and separator, as described in this specification, drawings, and model.

No. 5,958.—HENRY RUTTAN, of Cobourg, Canada West.—*For Method of Warming and Ventilating Buildings.*—Patent dated December 5, 1848; reissued August 14, 1855; additional improvement November 6, 1855.

Claim.—The mode of warming and ventilating buildings, the same consisting of introducing the air from without at some point sufficiently above the ground to get a pure air, and sufficiently low down to get clear of smoke: said air so to be introduced, being conducted under the floor of the building and directly under the furnace or stove, for the purpose of supplying air to be warmed for distribution, and after being thus warmed raising in a central or otherwise convenient apartment or passage, and thence carried into the various rooms by openings in the walls at the upper part or near the ceilings, without the aid of pipes, and thence downwards through suitable openings in the lower part of the room, and thence outwards through the various channels provided, connected with the foul-air flue or chimney.

Also, not simply introducing warm air at the top of a room and discharging it at the bottom, but only this when effected in the manner substantially as described, and this when applied to buildings or apartment of any known description.

Also, in the air-warming furnace the arrangement of the radiating pipes or flues, in combination with the fire chamber, situated within or between them, in the manner above set forth, and in combination with the elevated air chamber and flues.

Also, the arrangement of the opening for admitting heated air above the fire to complete the combustion, as herein set forth.

Also, the mode as herein described of constructing the grate, viz: of raising one or more cylindrical grates above the grate floor, said grate floor being cupped or covered in such a manner as to protect the vertical bars from the fuel, substantially in the manner set forth. It is understood that the raised grate may vary in form, so that the principle of action shall remain the same.

Also, the mode of conducting the air into the pure-air shafts, whatever may be the direction of the wind, viz: by placing the swinging valve or shutter at the mouth of said shafts, substantially in the manner set forth.

No. 5,509.—PAULINA SMITH, MORTIMER SMITH, and JANE SMITH, (by her Gaurdian, IRA TOMS,) heirs-at-law of AARON SMITH, (deceased,) late of Bloomfield, Mich.—*Improvement in Grain Separators.*—Patented April 11, 1848.

Claim.—First, the revolving rake, constructed and operating as described for shaking up and separating the straw and the grain, and carrying the straw through the machine.

Second, the motion of the screen in combination with that of the rake, its motion being pendulous and in reverse direction to that of the rake, as described.

No. 5,459.—ROBERT HILLSON, of Albany, N. Y.—*Improvement in Hot-air Furnaces.*—Patented February 29, 1848.

Claim.—First, the invention of a grate with a hemispherical or conical projection or boss rising upward in the centre thereof; the part of the grate outside of said boss being flat, as an improvement upon former grates, which are either flat or hemispherical, or hemicylindrical, both the flat part and the projecting part of the grate being grated.

Second, the use of the circular rim which rests upon a circular opening in the bed plate and moves circularly thereon, and upon which the grate hangs by pivots resting on sockets in the rim, as above described, as an improvement upon the former mode by which the grate rested by its sockets immediately on the bed plate.

Third, the manner described of dumping the grate by means of the cross-bars and handles, and the ways or projections for the cross-bars to move upon, the grate being suspended in the manner set forth.

Fourth, the separate air chamber marked A, Fig. 1, constructed against the side of the lower cylinder, which may be extended to the top of the upper cylinder, for the purpose of heating an adjoining room, as described.

Fifth, the connecting of the part of the furnace below the fire, by means of a continuous air passage and pipe, with the room to be heated, so as to draw from that room solely the air for the support of the fire, for the purpose of creating a draught into that room of the hot air from the furnace, as described.

Sixth, there is not claimed the cylindrical box or drum called the hot-air circular, and represented in Fig. 5, nor the smoke circular represented in Fig. 6; but the combination of this smoke circular with this cylindrical box or drum, in the manner and for the purpose described.

No. 5,522.—LEWIS MOORE, of Ypsilanti, Mich.—*Improvement in Seed Planters.*—Patented April 18, 1848.

Claim.—First, the particular combination and arrangement of the levers C, round P, bar C'', journals *p*, with the hopper B, frame A, and notched supports *g*, for moving the hopper and sowing cylinders in the arc of a circle, for the purpose set forth.

Second, the combination of segmental slotted box plates F', containing the bearings of the cylinder axles with the hopper, arranged and operated in the manner and for the purpose set forth.

Third, the manner of attaching the tubular drills L to the forked rods or bars K by the means of the wood and iron pins *q r* and flanges or wings *s*, as described, and for the purpose set forth.

Fourth, the combination of the chains O with the tubes L and bar C' of the hopper frame, by which the tubes are raised or lowered simultaneously with turning the hopper on its axis, as described.

No. 5,529.—JOHN HALL, executor of SAMUEL HALL, deceased, late of Pittsburg, Pa.—*Improvement in Ploughs.*—Patented April 25, 1848.

Claim.—First, the manner of securing the beam to the body of the plough by means of the curved termination of the rear end of the beam, the socket *p*, between the mould board and land side, the ear *g* projecting from the mould board, with the slot J in the same, and the screw bolt *h*, the whole combined and operating substantially in the manner and for the purpose set forth.

Second, in combination with the foregoing described method of confining the beam to the body of the plough, the manner of giving a lateral adjustment to the front end of the beam by means of the wedge *e*, substantially as set forth.

Third, in combination with the method of securing the beam to the body of the plough, the manner of combining the handles with the beam by means of the projecting arm *s*, the aperture W, and slot *s*, in the same, and the screw bolt *i i*, combined and operating with the front end of the beam, substantially as set forth.

Fourth, the manner of forming and uniting the wrought share with the point and cutter, by the combination of riveting and welding, substantially in the manner and for the purpose set forth.

No. 5,531.—ASA WHITNEY, of Philadelphia, Pa.—*Improvement in Annealing and Cooling Cast-iron Car Wheels.*—Patented April 25, 1848.

Claim.—The process of prolonging the time of cooling, in connexion with annealing railroad wheels in the manner described, that is to say, the taking them from the moulds in which they are cast before they have become so much cooled as to produce such inherent strain on any part as to impair its ultimate strength, and immediately after being thus taken from the moulds, depositing them in a previously heated furnace or chamber, so constructed of such materials and subject to such control that the temperature of all parts of the wheels deposited therein may be raised to the same point, (say a little below that at which fusion commences,) when they are allowed to cool so fast and no faster than is necessary for every part of each wheel to cool and shrink simultaneously together, and no one part before another.

No. 5,536.—CHARLES GOODYEAR, Jr., of New Haven, Conn., executor of CHARLES GOODYEAR, deceased, late of New Haven, Conn.—*Improvement in Making Hollow Articles of India-rubber.*—Patented April 25, 1848.

Claim.—The described process of making hollow spheres, various hollow toys, or other hollow articles of caoutchouc, the same consisting in the employment of a mould, and heat, and air, substantially in the manner and under the circumstances set forth.

No. 5,585.—EDWARD SPAIN, of Philadelphia, Pa.—*Improvement in Churns.*—Patented May 16, 1848.

Claim.—The giving the dasher the form represented and described, which, while it imparts a compound reciprocating and rotating motion to the cam as it is operated upon, thereby also enables a large-sized dasher to be passed whole through a comparatively small-sized square aperture in the side of the barrel, as set forth.

No. 5,575.—A. T. SERRELL, of New York, N. Y.—*Improvement in Machinery for Making Mouldings.*—Patented May 16, 1848; reissued January 7, 1851; again reissued June 21, 1853.

Claim.—The application of the changeable feeding rollers *c l*, made as disks or flat rings, with serrated edges of varying angles and changeable or unequal diameters to feed in materials cut in varying or irregular sections, in combination with changeable rotary cutters and changeable standing planes, to produce wood mouldings of different sizes with smooth surfaces from material cut or prepared in varying or unequal sections for such purposes, the whole applied, constructed, and operating substantially in the manner and with the effects described and shown.

No. 5,876.—JARVIS HOWE, of Worcester, Mass.—*Improvement in Boot-Trees.*—Patented October 24, 1848.

Claim.—The combination of the swivel and turning journal and its bearing with the frame boot tree and mechanism for distending the parts of the leg, substantially as set forth.

Also, the peculiar arrangement of the boot-tree upon its supporting stand, the same being represented in the drawing.

No. 5,918.—C. B. TURNER, of Buffalo, N. Y.—*Improvement in Brakes for Railroad Cars.*—Patented November 14, 1848.

Claim.—First, constructing the brake so as to act simultaneously on all the wheels of the car or cars of the train, on opposite sides, by the momentum and resistance of the several cars and the consequent contact of the bumpers, which actuate the rubbers, and by which the motion of the car is arrested; that is to say, the combination of the rubbers K, levers D, shafts C G, bars I, and rods O E, arranged and operated in the manner and for the purpose above set forth, or other modes substantially the same, or operated by manual power applied through the agency of the windlasses *e*, chains *f*, levers *b*, rods *d*, or other similar contrivances.

Second, the manner of constructing the sliding spring bumper for operating the brake by the momentum and resistance of the cars, as described; that is to say, the combination of the slide P with the bumper X and spring S, constructed, arranged, and operating in the manner described, or other mode which may be substantially the same.

No. 5,935.—JOHN LIGHTNER, of Roxbury, Mass.—*Improvement in Boxes for the Journals of Railway Cars.*—Patented November 21, 1848.

Claim.—The movable plate K, and aperture S, made through the front of the box, in combination with one another and the composition bearing and enclosing case, and made to operate substantially as above specified.

DESIGNS.

No. 1,508.—E. J. CRIDGE, of Troy, N. Y.—*Design for Stove Plates.*—Patent dated January 7, 1862.

Claim.—The configuration and ornament thereon, as set forth.

No. 1,509.—ROBERT HAM, of Troy, N. Y., assignor to SMITH, SHELDON & CO., of the same place.—*Design for a Cook Stove.*—Patent dated January 7, 1862.

Claim.—A cook stove, ornamented as described.

No. 1,510.—LUTHER W. HARWOOD, of Troy, N. Y., assignor to PHILO P. STEWART, of the same place.—*Design for Parlor Stove Plates.*—Patent dated January 7, 1862.

Claim.—A design for parlor stove plates, having the ornamental features as described.

No. 1,511.—DAVID HATHAWAY, of Troy, N. Y., assignor to FULLER, WARREN & CO., of the same place.—*Design for Cook Stove Plates.*—Patent dated January 7, 1862.

Claim.—Cook stove plates ornamented as described.

No. 1,512.—DAVID HATHAWAY, of Troy, N. Y., assignor to FULLER, WARREN & CO., of the same place.—*Design for Plates of an Elevated Oven Cooking Stove.*—Patent dated January 7, 1862.

Claim.—Elevated oven cooking plates, shaped and ornamented as described.

No. 1,513.—THOMAS H. WOOD, HENRY S. HUBBELL, and ALFRED S. HUBBELL, of Utica, N. Y.—*Design for Cast Iron Tops and Bottoms for Parlor Stoves.*—Patent dated January 7, 1862.

Claim.—The general design and configuration as represented.

No. 1,514.—THOMAS H. WOOD, of Utica, N. Y., and HENRY S. and ALFRED S. HUBBELL, of Buffalo, N. Y.—*Design for a Cooking Stove.*—Patent dated January 7, 1862.

Claim.—The general design and configuration as represented.

No. 1,515.—THOMAS H. WOOD, of Utica, N. Y., and HENRY S. and ALFRED S. HUBBELL, of Buffalo, N. Y.—*Design for a Cooking Stove.*—Patent dated January 7, 1862.
Claim.—The general design and configuration as represented.

No. 1,516.—JAMES WILLIAMS, of Philadelphia, Pa., assignor to L. M. WILLIAMS & CO., of the same place.—*Design for a Trade Mark.*—Patent dated January 7, 1862.
Claim.—The trade mark having the figure and letters as represented.

No. 1,517.—STEPHEN D. ARNOLD, of New Britain, Conn., assignor to P. & F. CORBIN, of the same place.—*Design for a Lift or Handle.*—Patent dated January 21, 1862.
Claim.—The combination of the handle *a*, with the pendant *c*, to produce a rich and highly ornamental design or pattern for a lift or handle, substantially as and for the purpose described.

No. 1,518.—JOHN B. EARNSHAW, of Cincinnati, Ohio.—*Design for a Monument.*—Patent dated January 21, 1862.
Claim.—The monumental design as represented.

No. 1,519.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a New Pattern for Carpets.*—Patent dated January 21, 1862.
Claim.—Design or pattern for carpets, or other fabrics, as set forth.

No. 1,520.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a New Pattern for Carpets.*—Patent dated January 21, 1862.
Claim.—Design or pattern for carpets, or other fabrics, as set forth.

No. 1,521.—JOHN DEAN and SAMUEL P. EMERSON, of Worcester, Mass.—*Design for Daguerreotype and Photograph Preserver.*—Patent dated February 4, 1862.
Claim.—The ornamental design for a Daguerreotype and Photograph Preserver, substantially as described.

No. 1,522.—SIMEON HAYES, of Prattsburg, N. H.—*Design for Trellis Frame.*—Patent dated February 4, 1862.
Claim.—The general design and configuration described, for a plant-supporting trellis.

No. 1,523.—CHARLES J. SHEPARD, of New York. N. Y.—*Design for a Stove.*—Patent dated February 4, 1862.
Claim.—The peculiar form and figure described and set forth as the design for a stove.

No. 1,524.—JOHN EIBERIVEISER and EDWARD KETTLER, of Cincinnati, Ohio.—*Design for a Stove.*—Patent dated February 11, 1862.
Claim.—The design of a parlor or office stove, substantially as represented and described.

No. 1,526.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,525.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain, or other carpeting, in the form similar to the drawings.

No. 1,527.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,528.—HENRY G. THOMSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,529.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,530.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,531.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,532.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,533.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,534.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,535.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,536.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,537.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Pattern for Carpets.*—Patent dated February 11, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,538.—P. H. DRAKE, of Binghamton, N. Y.—*Design for a Bottle.*—Patent dated February 18, 1862.
Claim.—The general configuration of the parts described to represent a log cabin or cottage and constitute a new and original design for a bottle.

No. 1,539.—JABEZ W. HAYES, of Newark, N. J.—*Design for a Trade-mark for Sword Blades.*—Patent dated February 18, 1862.
Claim.—The ornamental design or trade-mark, the same comprising the head of Washington impressed on or in the sword blade, as described.

No. 1,540.—VICTOR MEYER, of New York, N. Y., assignor to ALDEN SAMPSON & SONS, of Manchester, Me.—*Design for a Pattern for Floor Oil Cloths, Carpets, and other Fabrics.*—Patent dated February 18, 1862.
Claim.—The design of whatever colors in kind or number, or in whatever contrasts or blending of colors or of light and shade.

No. 1,541.—GEORGE B. OWENS, of New York, N. Y.—*Design for a Clock Case.*—Patent dated February 18, 1862.
Claim.—The general configuration of the parts arranged and described to form a new and original design for a clock case.

No. 1,542.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated February 25, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,543.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated February 25, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,544.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated February 25, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,545.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated February 25, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,546.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated February 25, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,547.—ISAAC B. WOODRUFF, of Winchester, Conn.—*Design for a Clock Case.*—Patent dated February 25, 1862.
Claim.—The design for a clock case C, the base A of which joins the body B, by an inverted ovolo or quadrant *a*, as and for the purpose described.
Also, the use of an entire gilt frame D, in combination with a dark-colored case C, and locked by a spring knob *c*, as and for the purpose specified.

No. 1,548.—HENRY HEBBARD, of New York, N. Y.—*Design for Spoon or Fork Handles.*—Patent dated March 4, 1862.
Claim.—The application and use of the design described, for ornamenting the fronts and backs of the handles of spoons, forks, and other articles of table ware.

No. 1,549.—JOHN J. MARCY, of Meriden, Conn., assignor to EDWARD MILLER, of the same place.—*Design for a Lantern.*—Patent dated March 18, 1862.
Claim.—The general configuration of the parts described to form a new and original design for a combined hand lamp and lantern.

No. 1,550.—ELIMER J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated March 18, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,551.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated March 18, 1862.

Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,552.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for Carpet Pattern.*—Patent dated March 18, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,553.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated March 18, 1862.
Claim.—The design or pattern for a carpet or other fabrics set forth.

No. 1,554.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated March 18, 1862.
Claim.—The design or pattern for a carpet or other fabrics set forth.

No. 1,555.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated March 18, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,556.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated March 25, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,557.—WILLIAM W. STEVENS, of Portland, Maine, assignor to NATHANIEL P. RICHARDSON & Co., of the same place.—*Design for a Cooking Stove.*—Patent dated March 25, 1862.
Claim.—The configuration and ornaments described and shown in the drawings as a design for a cooking stove.

No. 1,558.—JOHN ROGERS, of New York, N. Y.—*Design for a Group of Figures.*—Patent dated April 1, 1862.
Claim.—The design for a group of statuary as described and shown.

No. 1,559.—JOHN ROGERS, of New York, N. Y.—*Design for a Group of Figures.*—Patent dated April 1, 1862.
Claim.—The design for a group of statuary as described and shown.

No. 1,560.—J. B. SARGENT, of New Britain, Conn.—*Design for Coat and Hat Hooks.*—Patent dated April 1, 1862.
Claim.—A new design for a coat and hat hook, having its bracket ornamented by a leaf A, as described.

No. 1,561.—WALTER W. STANARD, of Buffalo, N. Y., assignor to JEWETT & ROOT, of the same place.—*Design for Stove Plates.*—Patent dated April 1, 1862.

Claim.—The disposition and arrangement of the ornamental devices for the decoration of the plates of a stove, as described and represented.

No. 1,562.—GEORGE CROMPTON, of Worcester, Mass.—*Design for Top-Rail of Weavers' Looms.*—Patent dated April 8, 1862.
Claim.—The configuration and ornamental design of top-rail for looms, as shown.

No. 1,563.—A. C. BARSTOW, of Providence, R. I.—*Design for Base for Parlor Stove.*—Patent dated April 15, 1862.
Claim.—The new design for base for parlor stove, entitled the "Victor Gas Burner," having the general ornamental form and configuration as described and represented.

No. 1,564.—CALEB W. PALMER, of Troy, N. Y.—*Design for a Cooking Stove.*—Patent dated April 15, 1862.
Claim.—An elevated oven cooking stove, ornamented as described.

No. 1,565.—WALTER W. STANARD, of Buffalo, N. Y., assignor to SHERMAN S. JEWETT and FRANCIS H. ROOT, of the same place.—*Design for Cooking Stoves.*—Patent dated April 15, 1862.
Claim.—The described ornamental devices for the decoration and embellishment of the plates of a cooking stove, arranged and combined as represented.

No. 1,566.—WALTER W. STANARD, of Buffalo, N. Y., assignor to SHERMAN S. JEWETT and FRANCIS H. ROOT, of the same place.—*Design for Cooking Stoves.*—Patent dated April 15, 1862.
Claim.—The combination and arrangement of the ornamental devices for the decoration of the plates of a cooking stove, described and represented.

No. 1,567.—W. H. COVE, of New York, N. Y., assignor to Himself and A. LORENZ, of the same place.—*Design for a Show Case.*—Patent dated April 22, 1862.
Claim.—The base A, consisting of a plinth *a*, cavetto *b*, inclined flat member *c*, torus *d*, and ovolo *e*, as shown and described. Also, the pillars C, with four sides *g g' f f'*, connecting with each other, as shown and described.
Also, the octagonal bars *h* of the top frame D.

No. 1,568.—CHARLES H. FROST, of Peekskill, N. Y.—*Design for a Cooking Stove or Range.*—Patent dated April 29, 1862.
Claim.—The combination of mouldings, as set forth.

No. 1,569.—WILLIAM H. GREEN and P. J. CLARK, of Meriden, Conn., assignors to S. S. CLARK, of the same place.—*Design for a Chandelier.*—Patent dated April 29, 1862.
Claim.—The general configuration of the central part B, lamp circles or holders D D, and cap E, as shown and described, to form a new and original design for parts pertaining to a chandelier.

No. 1,570.—NATHAN P. MAKER, of Pawtucket, R. I.—*Design for a Crucifix.*—Patent dated April 29, 1862.
Claim.—A cross A, with flaring edges *a*, and having its arms *b c d e* proportioned as described, with the body B of Christ suspended from the same, and with the subscription *f*, all as specified.

No. 1,571.—J. B. SARGENT, of New Britain, Conn.—*Design for Coffin Handles.*—Patent dated April 29, 1862.
Claim.—The wreath *a*, with acorns *b*, shown and described. Also, in combination with the wreath *a*, the spherical centre plate C. Also, the acorns *c*, in combination with the wreath *a* and handle B. Also, the leaves *d* and *e*, with acorns *f* on the handle B.

No. 1,572.—JOHN W. BURT, of New York, N. Y.—*Design for an Anklet.*—Patent dated May 6, 1862.
Claim.—The two ogees *e* on the upper edge of an anklet A, and the two ogees *h* on its lower edge, and also the peak *g* formed in the manner shown and described.

No. 1,573.—GEORGE B. OWENS, of New York, N. Y.—*Design for a Clock Case.*—Patent dated May 6, 1862.
Claim.—The general configuration of the parts shown and described, to form a new and original design for a clock case.

No. 1,574.—WILLIAM G. PHILIPS, of Newport, Cal.—*Design for an Arm Chair.*—Patent dated May 6, 1862.
Claim.—The general configuration of the parts shown and described, to form a new and original design for an arm chair.

No. 1,575.—HENRY TERHUNE, of New York, N. Y.—*Design for a Clock Case.*—Patent dated May 6, 1862.
Claim.—The general configuration of the parts shown and described, to form a new and original design for a clock case.

No. 1,576.—HENRY A. FOWLER, of Alton, N. Y.—*Design for a Hame Fastening.*—Patent dated May 13, 1862.
Claim.—The ornamental design for a hame fastening, as shown and described.

No. 1,577.—DAVID FOYER, of Dover, N. H., assignor to ABRAHAM FOLSOM & Co., of Boston, Mass.—*Design for a Floor-cloth Pattern.*—Patent dated May 13, 1862.
Claim.—The said design, pattern, or print, as my invention or production.

No. 1,578.—FREDERICK S. OTIS, of Brooklyn, N. Y.—*Design for a Clock Case Front.*—Patent dated May 13, 1862.
Claim.—The columns A A, arranged as described; the spiral wreaths *g*, blocks *d*, central arch C, and entablature F G H, all as shown and specified.

No. 1,579.—FREDERICK S. OTIS, of Brooklyn, N. Y.—*Design for Clock Case Fronts.*—Patent dated May 13, 1862.
Claim.—The arbor C, consisting of rose bushes *f*, grape vines *e*, roses *f'*, grape leaves *e'*, and grapes *e''*, arabesques *d* and *g*, and roses *i*, as shown and described. Also, the posts B, rose branches *j*, flowers *j''*, and buds *j'*, circular wreath *m*, and arabesques *l*, all as specified.

No. 1,580.—JOHN R. WENETT, of New York, N. Y.—*Design for Spoons.*—Patent dated May 13, 1862.
Claim.—The handle B of a spoon, when the same is ornamented with an antique metal C, as specified. Also, the bell *i j k*, bands *f h*, rosette *d*, bars *c*, and volutes *a*, all as shown and described.

No. 1,581.—CHARLES J. WOOLSON, of Cleveland, Ohio.—*Design for Cooking Stoves.*—Patent dated May 13, 1862.
Claim.—The configuration and arrangement of said ornamental work, as designated and represented.

No. 1,582.—JAMES PATERSON, of Elizabeth, N. J., assignor to DEBORAH POWERS, ALBERT E. POWERS, and NATHANIEL POWERS, of Lansingburg, N. Y.—*Design for Floor Oil Cloths.*—Patent dated May 20, 1862.
Claim.—The pattern or design for floor oil cloths, as set forth and described in the specification and shown upon the drawings.

No. 1,583.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated May 20, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,584.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated May 20, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,585.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated May 20, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,586.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated May 20, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,587.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated May 20, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,588.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated May 20, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting. in the form similar to the drawings.

No. 1,589.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated May 20, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,590.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated May 20, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,591.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated May 20, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,592.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated May 20, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,593.—HENRY G. THOMPSON, of New York, N. Y, assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated May 20, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,594.—HENRY G. THOMPSON. of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated May 20, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,595.—JOHN ROGERS, of New York, N. Y.—*Design for a Group of Statuary.*—Patent dated May 27, 1862.
Claim.—A design for a group of statuary, as described and shown.

No. 1,596.—JOHN ROGERS, of New York, N. Y.—*Design for a Group of Statuary.*—Patent dated May 27, 1862.
Claim.—A design for a group of statuary, as described and shown.

No. 1,597.—JOHN ROGERS, of New York, N. Y.—*Design for a Group of Statuary.*—Patent dated May 27, 1862.
Claim.—A design for a group of statuary, as described and shown.

No. 1,598.—JOHN ROGERS, of New York, N. Y.—*Design for a Group of Statuary.*—Patent dated May 27, 1862.
Claim.—A design for a group of statuary, as described and shown.

No. 1,599.—LEWIS I. COHEN, of New York, N. Y.—*Design for the Backs of Playing Cards.*—Patent dated May 27, 1862.
Claim.—A design for the back of a playing card, the four national shields, arranged in the manner substantially as described.

No. 1,600.—A. C. BARSTOW, of Providence, R. I.—*Design for Base and Front for Parlor Stove.*—Patent dated June 3, 1862.
Claim.—The new design for base and front for parlor stoves, having the general ornamental form and configurations as described and represented in the drawings.

No. 1,601.—THOMAS G. BERING, of Philadelphia, Pa.—*Design for a Metal Fence.*—Patent dated June 3, 1862.
Claim.—The combination of the configurations and ornamentations specified, and shown in the panel A, and as a design for the fixed panel of a fence, the combination of the configurations and ornamentations specified and shown in the panel B, as a design for a fence.

No. 1,602.—J. G. FOLSOM and BAXTER D. WHITNEY, of Winchendon, Mass., assignors to J. G. FOLSOM aforesaid.—*Design for Sewing Machine Frames.*—Patent dated June 3, 1862.
Claim.—The design and configuration of the sewing machine frame as represented in the drawings and described.

No. 1,603.—PETER H. JACKSON, of New York, N. Y.—*Design for Metallic Frame for Fireplaces.*—Patent dated June 3, 1862.
Claim.—The ornamental design of the metallic fireplace frames, as described and shown.

No. 1,604.—G. L. KELTY, of New York, N. Y.—*Design for Tassel Tops.*—Patent dated June 10, 1862.
Claim.—The ornamental acorn-shaped top to the tassel, as represented.

No. 1,605.—WILLIAM L McDOWELL, of Philadelphia, Pa.—*Design for a Stove.*—Patent dated June 17, 1862.
Claim.—The raised panels *a a a* having the ornamented configurations thereon as described, and the raised panels *b b b* having the ornamented configurations thereon, as described, as a design for a stove.

No. 1,606.—WILLIAM L. McDOWELL, of Philadelphia, Pa.—*Design for a Stove.*—Patent dated June 17, 1862.
Claim.—The raised panels *a a* having the ornamented configurations thereon as described, and the raised panels *b b b* having the ornamented configurations thereon, as described, as a design for a stove.

No. 1,607.—JOHN MARTINO and JAMES HORTON. of Philadelphia, Pa., assignors to STUART and PETERSON, of the same place.—*Design for a Cook Stove.*—Patent dated June 17, 1862.
Claim.—The ornamental figures and forms represented by the drawing, and forming together an ornamental design for a cooking stove.

No. 1,608.—GEORGE B. OWEN, of New York, N. Y.—*Design for a Clock Case.*—Patent dated June 17, 1862.
Claim.—The general configuration of parts, as shown and described, to form a new and original design for a clock case.

No. 1,609.—JOHN F. RATHBONE, of Albany, N. Y.—*Design for the Plates of a Cooking Stove.*—Patent dated June 17, 1862.
Claim.—The combination and arrangement of figures and forms represented in the drawings, forming together the ornamental design for the plates of a cooking stove.

No. 1,610.—GARRETTSON SMITH and HENRY BROWN, of Philadelphia, Pa., SMITH, FRANCIS and WELLS, of Springville, Pa.—*Design for plates of a Cooking Stove.*—Patent dated July 1, 1862.
Claim.—The ornamental figures and forms represented by the drawing, the whole forming an ornamental design for the side, front, and back plates and the legs of a cooking stove.

No. 1,611.—GEORGE TAYLOR and JAMES LUSTY, of Amesbury, Mass.—*Design for Shoes.*—Patent dated July 1, 1862.
Claim.—A shoe A, ornamented with a flower *a*, stem *b*, bud *c*, and leaf *d*, all as specified on the front or toe part; also the tendrils *e*, forming rings $h\ h^1\ h^2\ h^3$, and ornamented with flowers $f\ f^1\ f^2\ f^3$ and leaves $g\ g^1\ g^2\ g^3$ on the heel, all as shown and described.

No. 1,612.—WILLIAM BOCH, of Newtown, N. Y.—*Design for a hand Fire-work.*—Patent dated July 8, 1862.
Claim.—The general configuration of the parts in connexion with the national colors, red, white, and blue, disposed, as shown and described, to form a new and original design for a hand fire-work, termed the "Ladies' Union Tri-colored Fire-work Fan."

No. 1,613.—JAMES SHARKEY, of Brooklyn, N. Y.—*Design for a Gateway and Fence for Burial Plots.*—Patent dated July 29, 1862.
Claim.—The general configuration of the parts, as shown and described to form a new and original design for a gateway and fence for burial plots.

No. 1,614.—WILLIAM H. GREEN and P. J. CLARK, of West Meriden, Conn., assignors to S. S. CLARK, of the same place.—*Design for a Lamp Bracket.*—Patent dated August 5, 1862.
Claim.—The general configuration of the parts shown and described to form a new and original design for a lamp bracket.

No. 1,615.—SILAS A. HOLMES, of Brooklyn, N. Y.—*Design for the Background of Photographic Pictures.*—Patent dated August 5, 1862.
Claim.—The ornamental design of a floor in perspective upon the screen or background for photographic pictures, as shown.
Also, the ornamental design of the vaulted room, as shown for the screen or background for photographic pictures.

No. 1,616.—JAMES HUTCHINSON, of Lansingburg, N. Y., assignor to JONATHAN E. WHIPPLE, of the same place.—*Design for Oil-cloths.*—Patent dated August 5, 1862.
Claim.—The general configuration of the described parts to form a new and original design for oil-cloths.

No. 1,617.—WILLIAM W. LYMAN, of West Meriden, Conn.—*Design for a Fruit Can.*—Patent dated August 5, 1862.
Claim.—The design for a fruit can, substantially as shown and described.

No. 1,618.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for Carpet Pattern.*—Patent dated August 5, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,619.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for Carpet Pattern.*—Patent dated August 5, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,620.—WILLIAM W. ROBERTS, of Hartford, Conn.—*Design for Burial Caskets.*—Patent dated August 5, 1862.
Claim.—The general design or pattern, substantially as represented in the drawings and description.

No. 1,621.—WILLIAM H. ROBERTS, of Hartford, Conn.—*Design for Burial Caskets.*—Patent dated August 5, 1862.
Claim.—The design or pattern for a burial casket, substantially as illustrated and described.

No. 1,622.—GARRETTSON SMITH and HENRY BROWN, of Philadelphia, Pa., assignors to COX, WHITEMAN & COX, of the same place.—*Design for the Plates of a Cook Stove.*—Patent dated August 5, 1862.
Claim.—The ornamental figures and forms, represented in and by the drawing, and forming together an ornamental design for the plates of a cooking stove.

No. 1,623.—RUSSELL WHEELER and STEPHEN A. BAILEY, of Utica, N. Y.—*Design for a Parlor Stove.*—Patent dated August 5, 1862.
Claim.—The form, ornaments, and design for a parlor stove, as described and represented.

No. 1,624.—STEPHEN D. ARNOLD, of New Britain, Conn.—*Design for Lifting Handle Plate.*—Patent dated August 12, 1862.
Claim.—The described ornamental design cast or struck up for a lifting handle plate, substantially as set forth.

No. 1,625.—JOHN W. BURT, of New York, N. Y.—*Design for an Anklet.*—Patent dated August 12, 1862.
Claim.—An anklet having points *a a'* at the upper and points *c c'* at the lower edge, and fastened by a lacing extending up from the boot or gaiter through eyelets *c*, as shown and described.

No. 1,626.—THOMAS W. EVANS, Philadelphia, Pa.—*Design for a Trade-Mark.*—Patent dated August 12, 1862.
Claim.—A trade-mark containing the words "Hunt's Bloom of Roses," as described.

No. 1,627.—JOHN GAULT, of Boston, Mass.—*Design for Encasing Government Stamps.*—Patent dated August 12, 1862.
Claim.—A circular metallic case, to contain a postage or government stamp, to be used for currency, the configuration of the open face plate being as described and represented.

No. 1,628.—CONSTANT HESDRA, of Brooklyn, N. Y., assignor to W. H. CORE and A. LORENZ, of New York, N. Y.—*Design for the Base of Show Cases.*—Patent dated August 12, 1862.
Claim.—The base A of a show case B, the said base consisting of a plinth *a*, ovolo *b*, ogee *c*, and inclined plane *d*, shown and described.

No. 1,629.—HENRY G. TYER, of Andover, Mass.—*Design for a Trade-Mark for Shoes.*—Patent dated August 12, 1862.
Claim.—The design for a trade-mark for shoes, as shown and described.

No. 1,630.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,631.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,632.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Designs for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,633.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,634.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,635.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,636.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,637.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Designs for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,638.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,639.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,640.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,641.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,642.—ELEMIR J. NEY, of Lowell, Mass, assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,643.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,644.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,645.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,646.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,647.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,648.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,649.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 12, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,650.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated August 19, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,651.—G. I. MIX, of Wallingford, Conn.—*Design for the Form of Spoon Shanks.*—Patent dated August 19, 1862.
Claim.—The design for the form of a spoon shank, which consists in having the convex *a*, flanked by the flat ribs *b b* and the bevelled edges *c c*, shown and described.

No. 1,652.—MYER PHINEAS, of New York, N. Y.—*Design for an Inkstand.*—Patent dated August 19, 1862.
Claim.—The design for an inkstand, represented in the drawings.

No. 1,653.—SALATHIEL ELLIS, of Mantorville, Minn.—*Design for a Medallion.*—Patent dated August 26, 1862.
Claim.—The design for a medallion likeness, as described and represented.

No. 1,654.—WILLIAM L. WASHBURN, of Albany, N. Y.—*Design for a Burial Case.*—Patent dated September 2, 1862.
Claim.—The burial case, having the form described and illustrated in the drawings, when ornamented by the corners *a a a a*, panels *b b b* and *c c*, and moulding *d*.

No. 1,655.—SAMUEL H. RANSOM, of Albany, N. Y.—*Design for an Elevated Oven Cook Stove.*—Patent dated September 9, 1862.
Claim.—The combination and arrangement of ornamented figures and forms represented in the drawings, forming together the ornamental design for an elevated oven cook stove.

No. 1,656.—SAMUEL W. GIBBS, of Albany, N. Y.—*Design for the Plates of a Stove.*—Patent dated September 23, 1862.
Claim.—The design and configuration or combination of figures and forms of the different plates composing a parlor grate stove or "Franklin grate," described and shown.

No. 1,657.—F. H. GIBNEY, of New York, N. Y.—*Design for a Spoon and Fork Handle.*—Patent dated September 23, 1862.
Claim.—The oval *a*, ornamented with ridges *d d'*, groove *e*, and arabesque *f* on the upper, and with ridges *m m'*, groove *n*, and curve *o p* on the under side; also, the shield *b*, ornamented on the upper side with border *g* and arabesque *i*, and on the under side with border *g'* and arabesque *q*; also the shaft *c*, ornamented on the upper side with a border *k* and arabesque *l*, and on the under side with ridges *r r'*, pear-shaped border *t*, and arabesque *v*, all as arranged and shown to form a spoon or fork handle, as described.

No. 1,658.—WALTER S. HILL and SAMUEL T. REED, of New York, N. Y.—*Design for a Chess and Checker Board.*—Patent dated September 23, 1862.
Claim.—A chess and checker board, having its squares provided with portraits, as shown and described, to form a new and original design for the same.

No. 1,659.—JAMES R. HYDE, of Troy, N. Y.—*Design for a Cook Stove.*—Patent dated September 23, 1862.
Claim.—A cooking stove, having plates ornamented as described.

No. 1,660.—H. I. SEYMOUR, of Troy, N. Y.—*Design for a Chair.*—Patent dated September 23, 1862.
Claim.—The general configuration of the parts, as shown and described, to form a new and original design for a chair.

No. 1,661.—N. S. VEDDER and EZRA RIPLEY, of Troy, N. Y., assignor to N. S. VEDDER, aforesaid.—*Design for the Plates of a Stove.*—Patent dated September 23, 1862.
Claim.—A stove plate or plates, having the surface thereof ornamented as described.

No. 1,662.—ELIAS INGRAHAM, of Bristol, Conn.—*Design for a Clock Case.*—Patent dated September 30, 1862.
Claim.—The design for a clock case, substantially as illustrated and described.

No. 1,663.—MATTHEW TOWNSEND, of Chelsea, Mass.—*Design for Knit Shawls.*—Patent dated October 14, 1862.
Claim.—The knit border, having raised or plaited lines or folds B B extending across it, as represented in the drawing.

No. 1,664.—GEORGE B. OWENS, of New York, N. Y.—*Design for a Clock Case.*—Patent dated October 21, 1862.

Claim.—The general configuration of the parts, as shown and described, to form a new and original design for a clock case.

No. 1,665.—C. A. ROBINSON, of New York, N. Y.—*Design for a Bottle.*—Patent dated October 21, 1862.
Claim.—The general configuration of the parts, shown and described, to form a new and original design for a bottle.

No. 1,666.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated November 11,1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,667.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated November 11, 1862.
Claim.—The design or pattern for carpets or other fabrics, set forth.

No. 1,668.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated November 11, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,669.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated November 11, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,670.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated November 11, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,671.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated November 11, 1862.
Claim.—The design or pattern for carpets or other fabrics, set forth.

No. 1,672.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated November 11, 1862.
Claim.—The design or pattern for carpets or other fabrics, set forth.

No. 1,673.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated November 11, 1862.
Claim.—The design or pattern for carpets or other fabrics, set forth.

No. 1,674.—GEORGE B. OWENS, of New York, N. Y.—*Design for a Clock Case.*—Patent dated November 11, 1862.
Claim.—The general configuration of the parts, as shown and described, to form a new and original design for a clock case.

No. 1,675.—JOHN W. BURT, of New York, N. Y.—*Design for an Anklet.*—Patent dated December 9, 1862.
Claim.—An anklet A, ornamented by buttons C and a seam B, representing false button-holes *d*, connected by a zig-zag line *e*, as shown and described.

No. 1,676.—JOHN B. CHARGOIS, of New York, N. Y.—*Design for a Trade-Mark.*—Patent dated December 9, 1862.
Claim.—The design for trade-mark of "Chargois Elixir," composed of the several devices, inscriptions, and border represented in the drawings and described.

No. 1,677.—DAVID FOYER, of Dover, N. H., assignor to ABRAHAM FOLSOM & SON, of Boston, Mass.—*Design for Floor Cloth Pattern.*—Patent dated December 9, 1862.
Claim.—The said design as my invention or production.

No. 1,678.—HENRY S. and ALFRED S. HUBBELL, of Buffalo, N. Y.—*Design for a Cook's Stove.*—Patent dated December 9, 1862.
Claim.—The general design or configuration represented in the drawings.

No. 1,679.—HENRY S. and ALFRED S. HUBBELL, of Buffalo, N. Y.—*Design for a Cook's Stove.*—Patent dated December 9, 1862.
Claim.—The general design or configuration represented in the drawings.

No. 1,680.—HENRY S. and ALFRED S. HUBBELL, of Buffalo, N. Y.—*Design for a Cook's Stove.*—Patent dated December 9, 1862.
Claim.—The general design or configuration represented in the drawings.

No. 1,681.—N. E. RUSSELL, of New York, N. Y.—*Design for the Handles of Table Cutlery.*—Patent dated December 9, 1862.
Claim.—The configuration and application of the plates B to the handles of table cutlery, to form a new and original ornamentation or design for the same, as set forth.

No. 1,682.—JOHN W. SCHREIBER, of New York, N. Y.—*Design for a Lamp Chimney.*—Patent dated December 9, 1862.
Claim.—The general configuration of the parts, as shown and described, to form a new and original design for a lamp chimney.

No. 1,683.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPAY.—*Design for a Carpet Pattern.*—Patent dated December 9, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,684.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 9, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,685.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 9, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,686.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 9, 1852.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,687.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 9, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawing.

No. 1,688.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 9, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,689.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 9, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,690.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 9, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,691.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 9, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,692.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 9, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,693.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 9, 1862.
Claim.—The configuration of the design, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,694.—HENRY G. THOMPSON, of New York, N. Y., assignor to the HARTFORD CARPET COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 9, 1862.
Claim.—The configuration of the design, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings.

No. 1,695.—DAVID FOYER, of Dover, N. H., assignor to ABRAHAM FOLSOM & SON, of Boston, Mass.—*Design for the Pattern of Floor Cloths, &c.*—Patent dated December 16, 1862.
Claim.—The design as described and substantially represented in the drawings.

No. 1,696.—JULIUS HOBZER, of Philadelphia, Pa., assignor to E. M. MANIGLE, of same place.—*Design for a Stove Plate.*—Patent dated December 16, 1862.
Claim.—The configurations described and specified, as an ornamental design for stove plates.

No. 1,697.—JOHN D. MARSHBANK, of Lancaster, Pa., assignor to Himself and WILLIAM MCCONKEY, of same place.—*Design for the Doors of a Cook Stove.*—Patent dated December 16, 1862.
Claim.—The arrangement of the ornamental figures on the front, side panels, and doors, as represented in the drawings, forming the ornamental design for the doors of a cook stove.

No. 1,698.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 16, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,699.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 16, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,700.—ELEMIR J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*—Patent dated December 16, 1862.
Claim.—The design or pattern for carpets or other fabrics set forth.

No. 1,701.—WILLIAM F. WARBURTON, of Philadelphia, Pa.—*Design for a Military Hat.*—Patent dated December 16, 1862.
Claim.—The shape and configuration of the hat as represented in and by the figs. 1, 2, and 3 of the drawings.

No. 1,702.—JOHN C. NOBLES, of Rushford, N. Y.—*Design for a Cane-head, Umbrella-handle, or Sword-hilt.*—Patent dated December 23, 1862.
Claim.—As a design for a cane-head, umbrella-handle, sword-hilt, and other similar purposes, the configuration or ornamentation set forth and explained.

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34046

Fig. 1

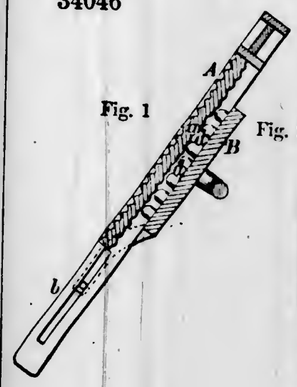
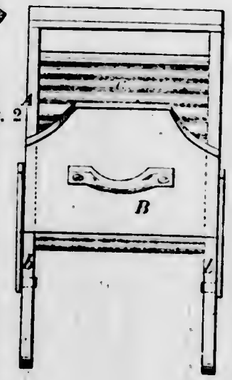


Fig. 2



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Fig. 1

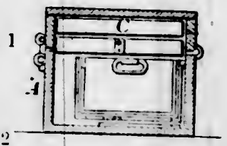
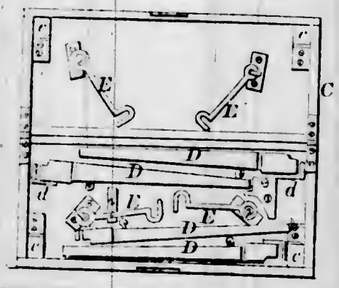
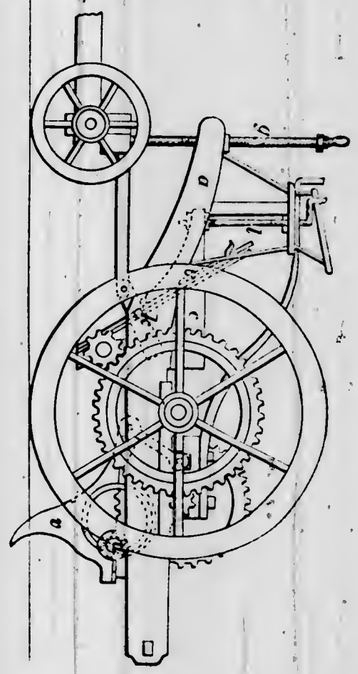


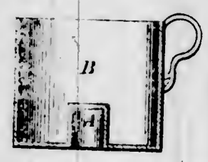
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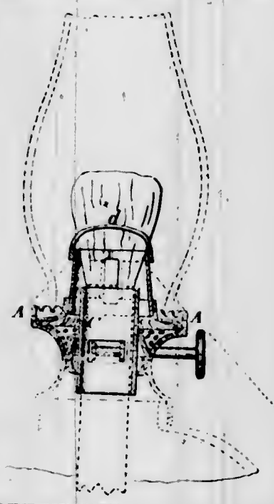
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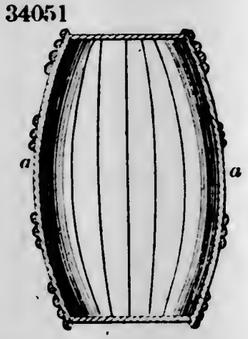
Fig. 1



Fig. 2

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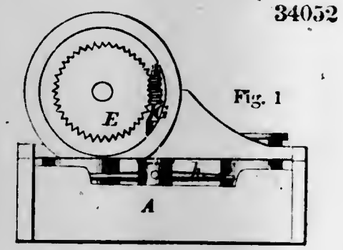
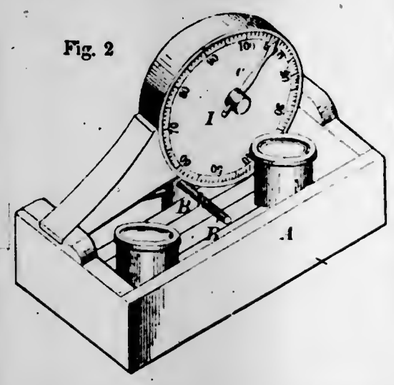
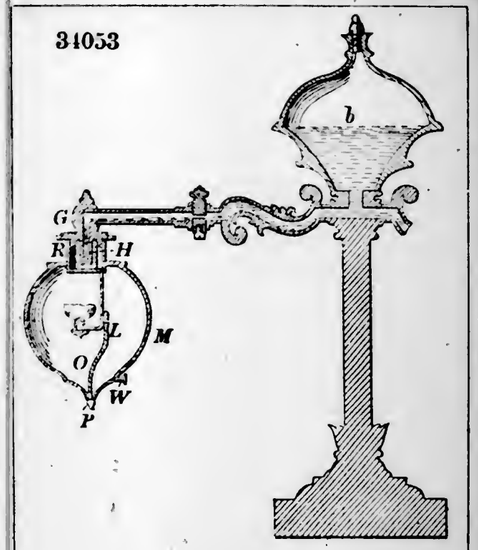


Fig. 1

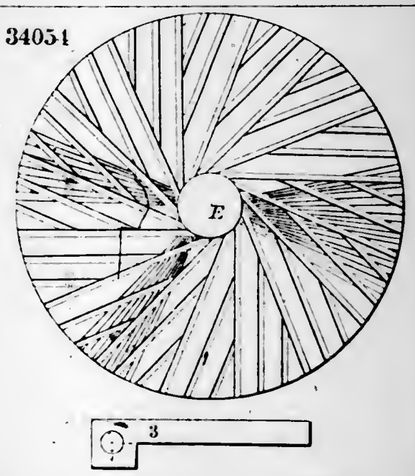
Fig. 2



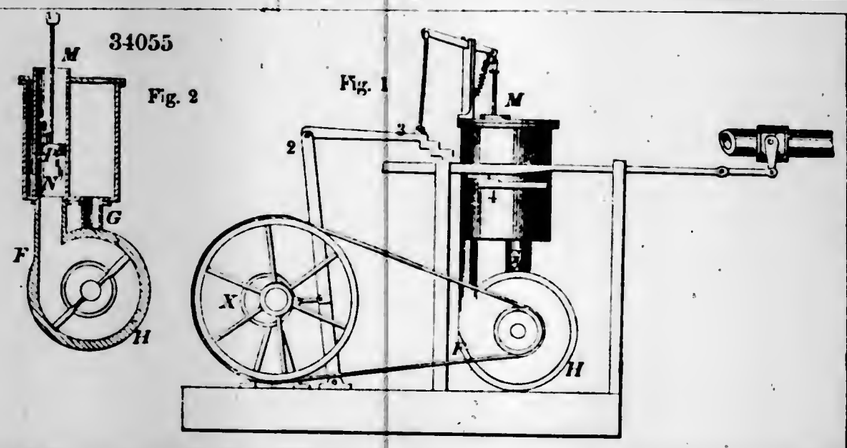
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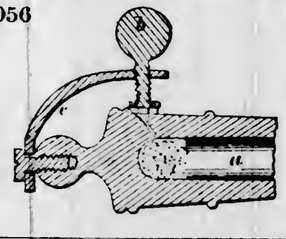
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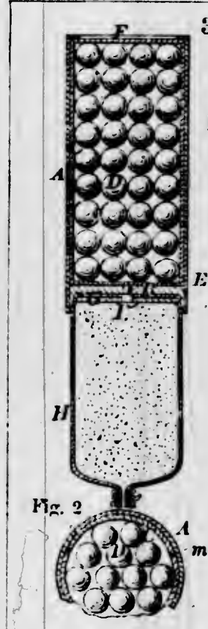


Fig. 1

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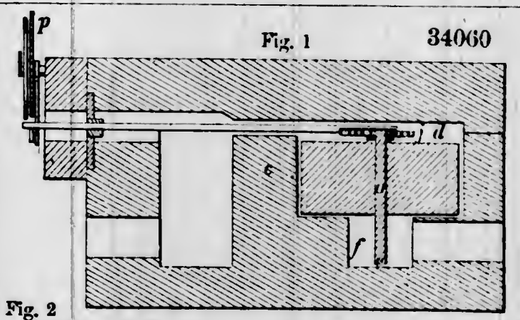
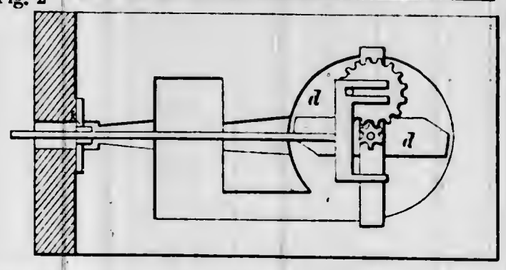


Fig. 1

Fig. 2



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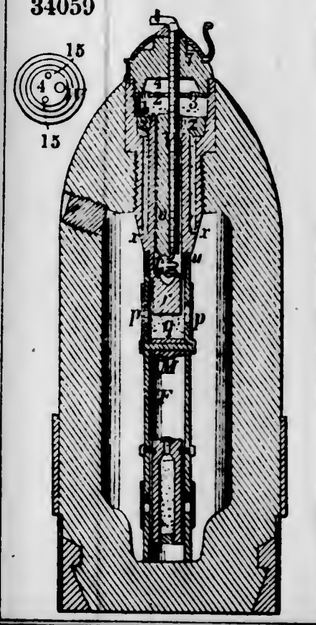
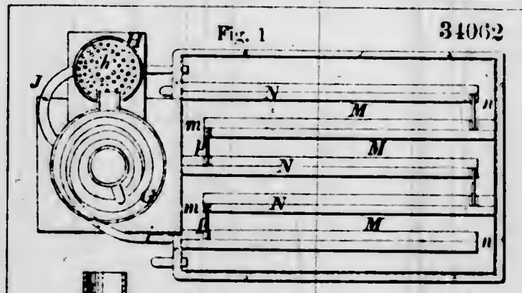


Fig. 1

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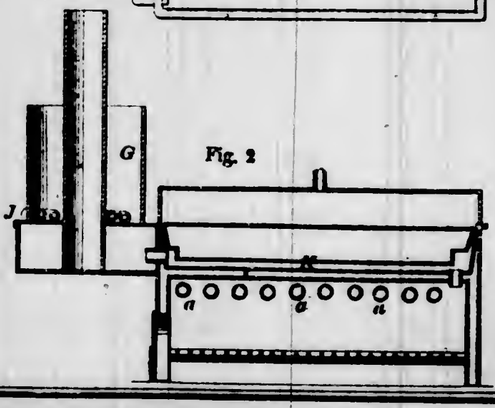


Fig. 2

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Fig. 1

Fig. 2

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Fig. 1

Fig. 2

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Fig. 2

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Fig. 1

Fig. 2

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34069 Fig. 1 Fig. 2 Fig. 3

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Fig. 1

Fig. 2

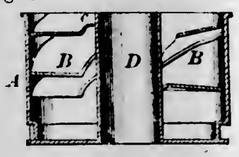
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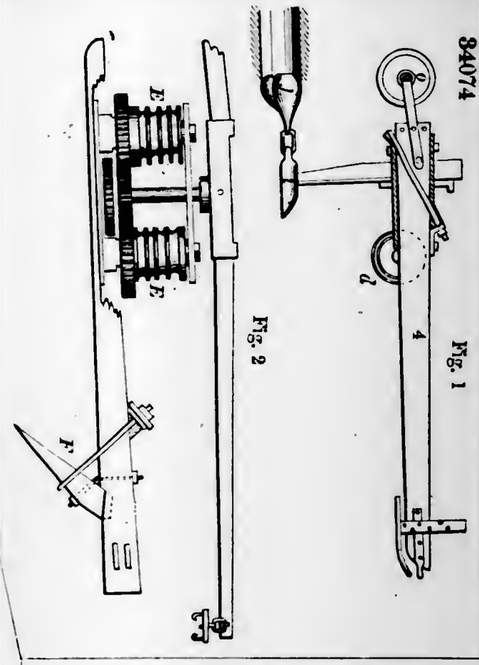
Fig. 1



Fig. 2

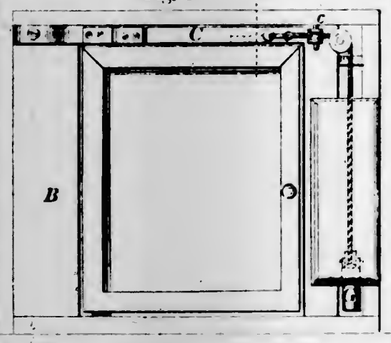


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Fig. 1



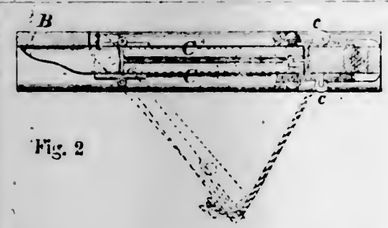
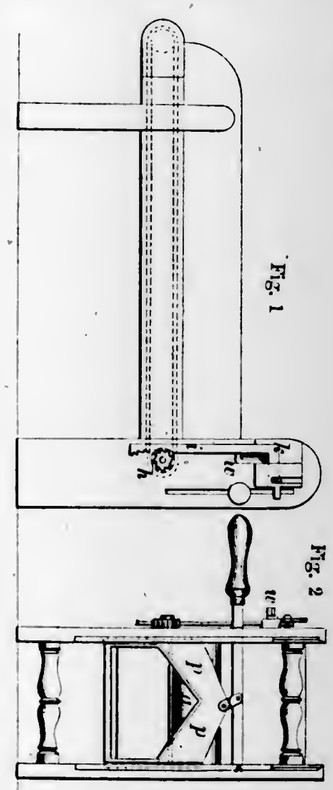


Fig. 2

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Fig. 1

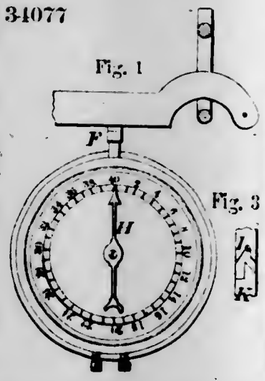
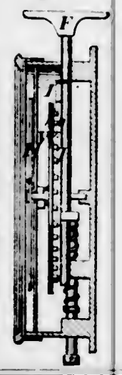
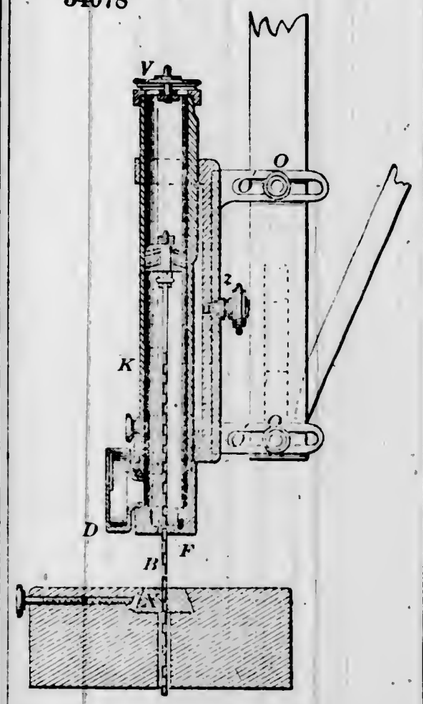


Fig. 3

Fig. 2



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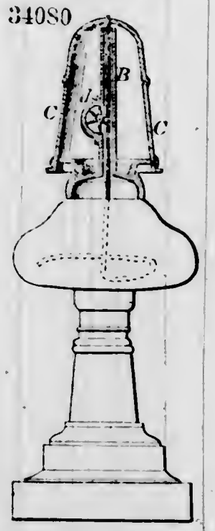


Fig. 1

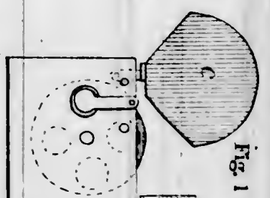
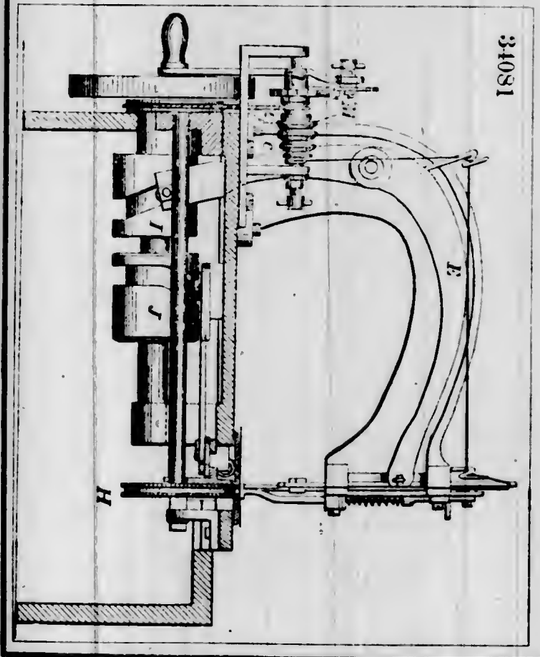


Fig. 2



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Fig. 1

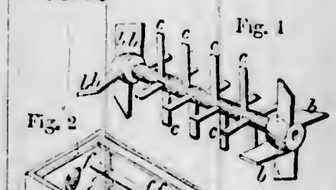
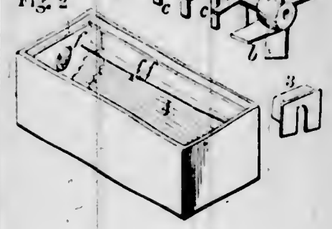


Fig. 2



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Fig. 1

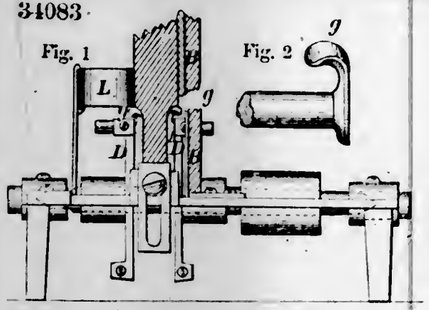
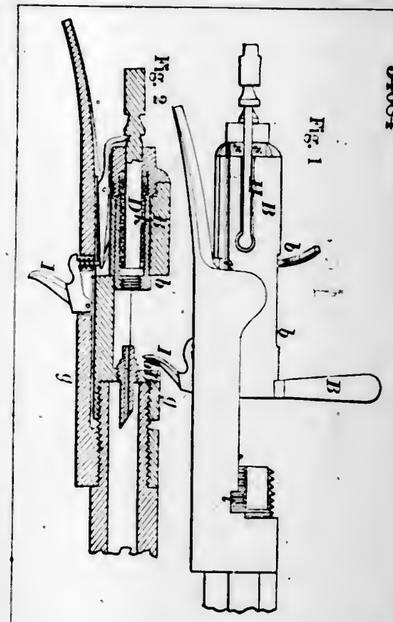
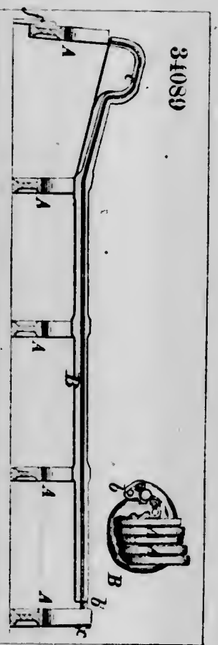


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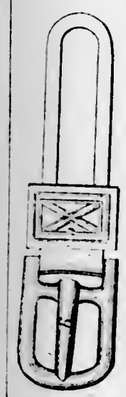
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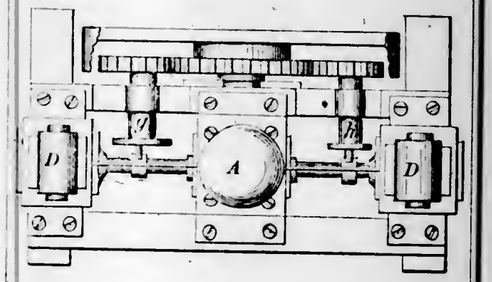
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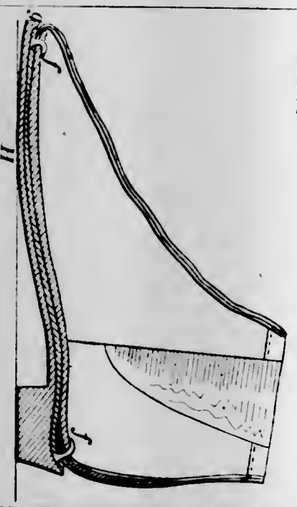
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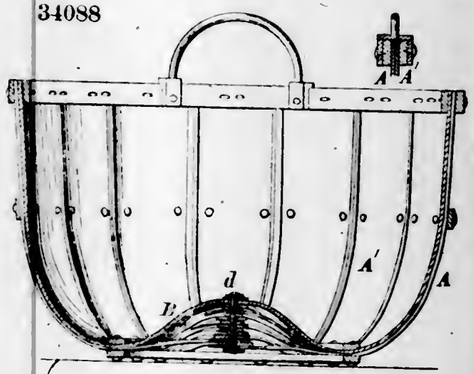
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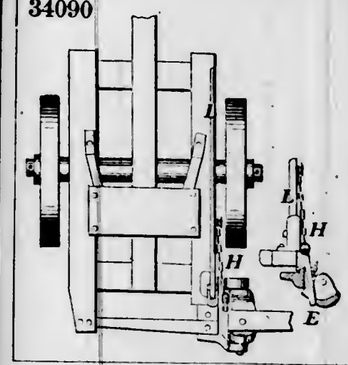
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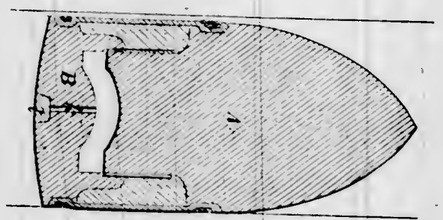
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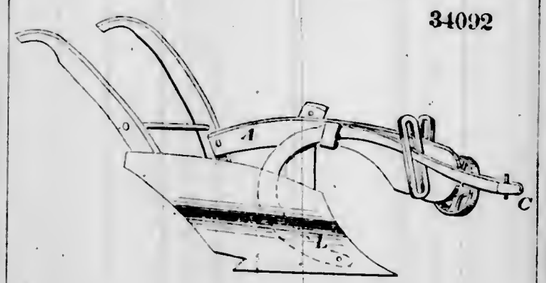
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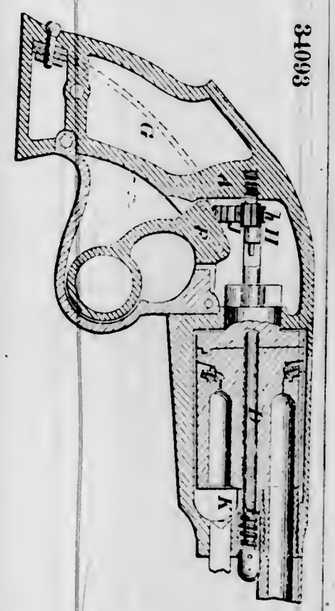
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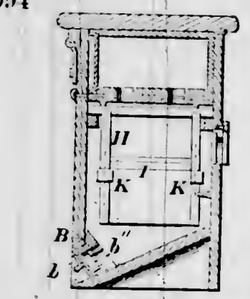
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Fig. 3



Fig. 1

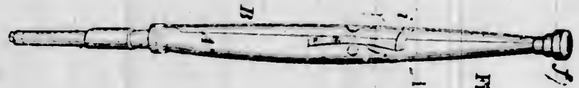
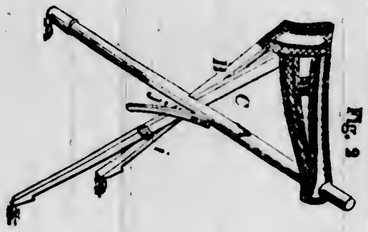


Fig. 2



34097

Fig. 1

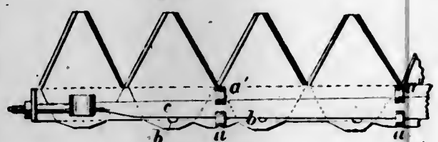


Fig. 2

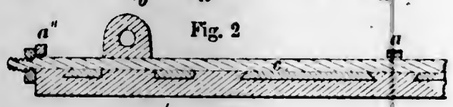
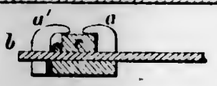


Fig. 3 b



34098

Fig. 1

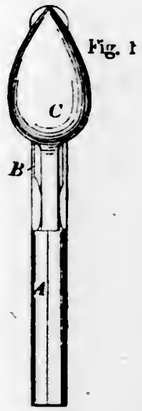
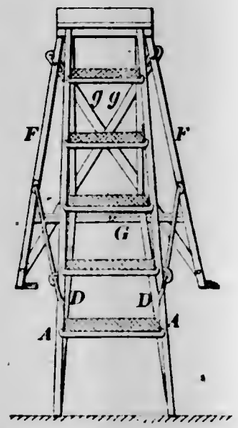


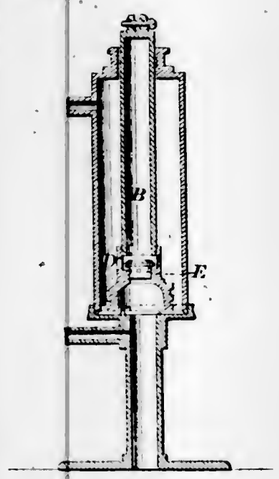
Fig. 2



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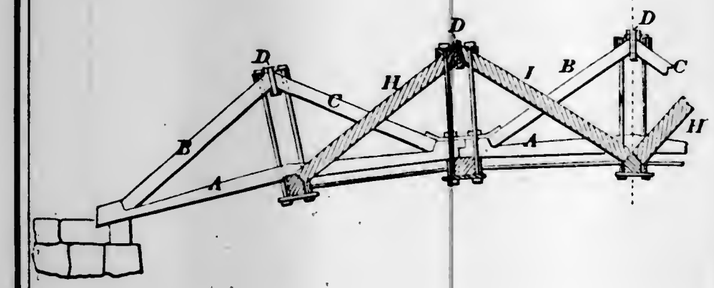
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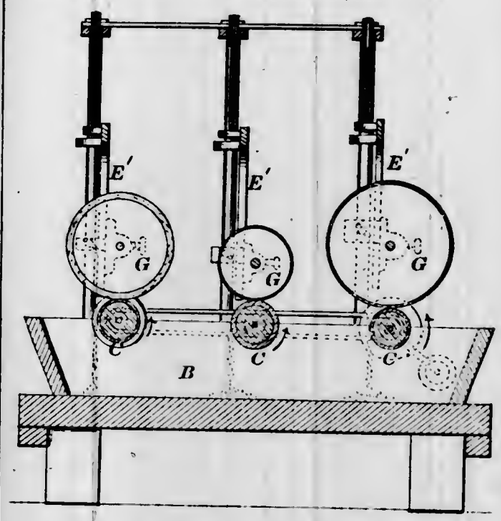
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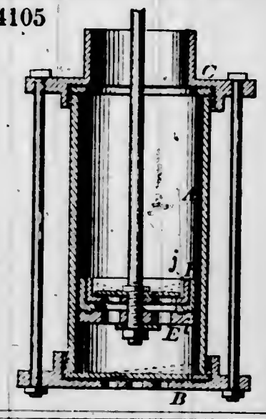
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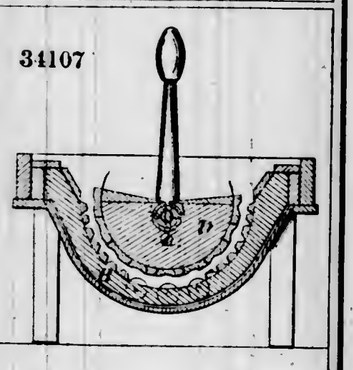
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34107



34109

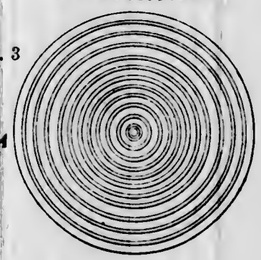
Fig. 1



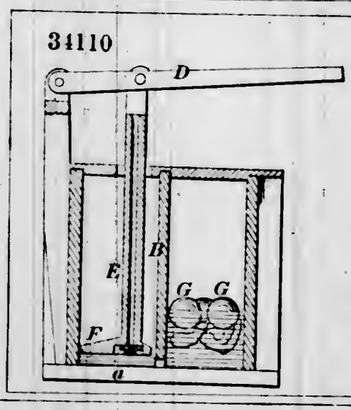
Fig. 2



Fig. 3



34110



34108

Fig. 1

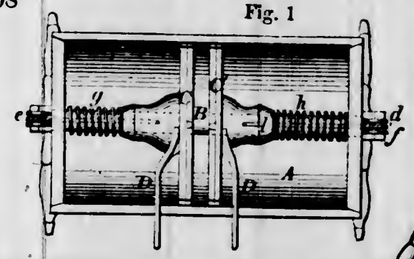
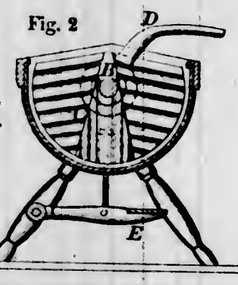


Fig. 2



34111

Fig. 1

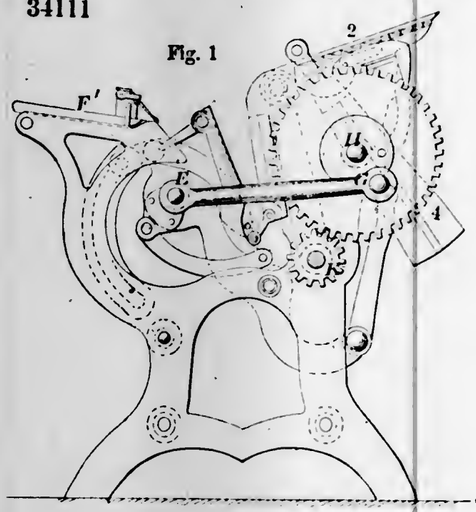
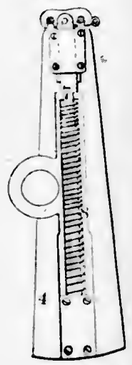
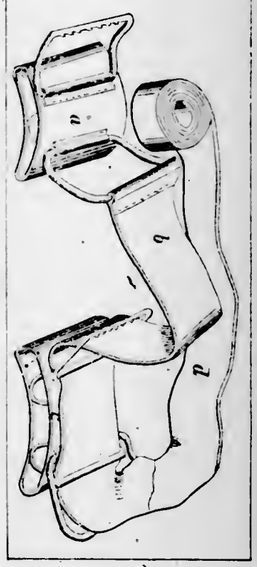


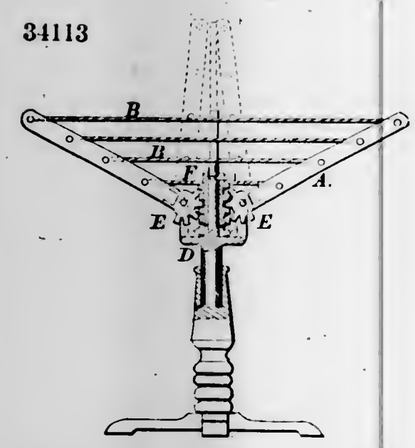
Fig. 2



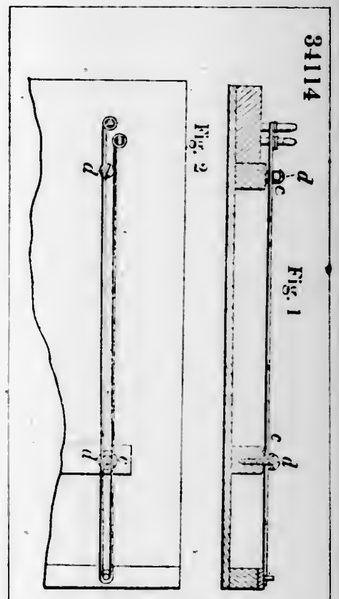
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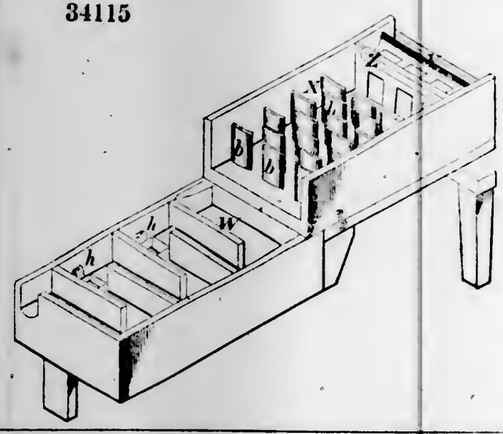
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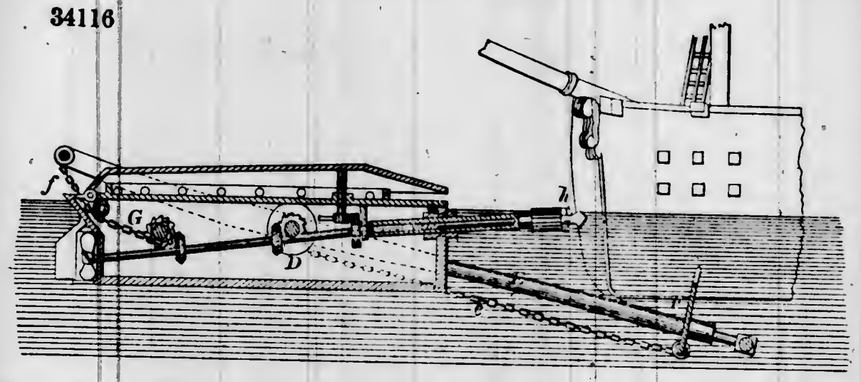
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Fig. 1

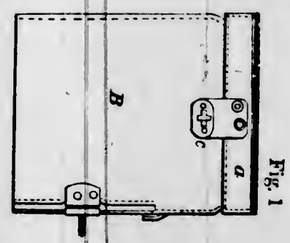
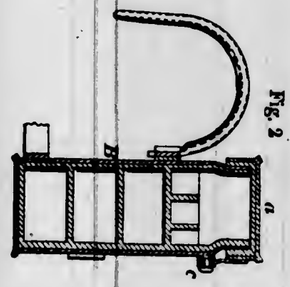


Fig. 2



34118 Fig. 1

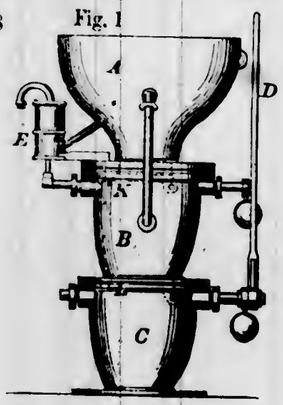
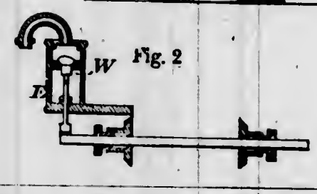
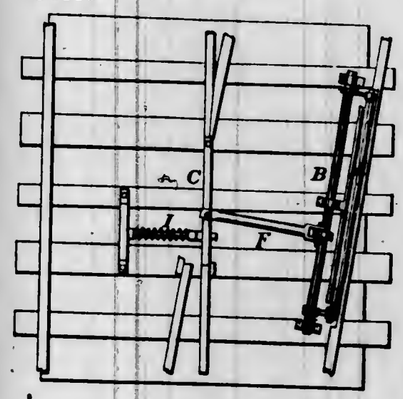


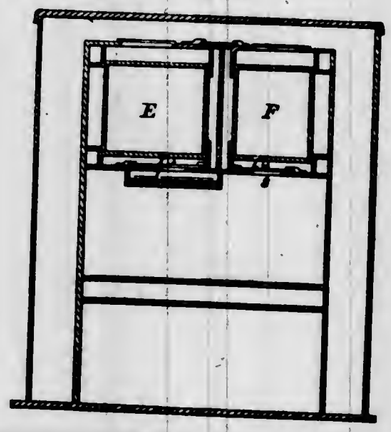
Fig. 2



34119



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34121

Fig. 2

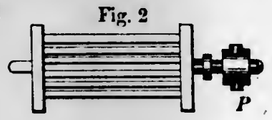
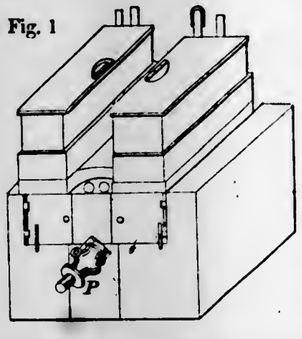
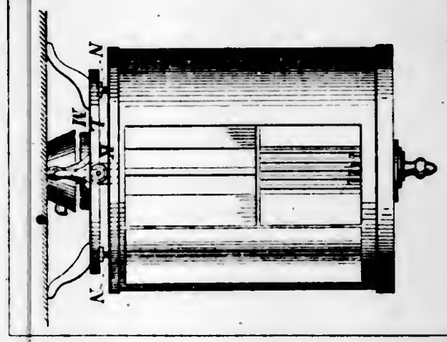


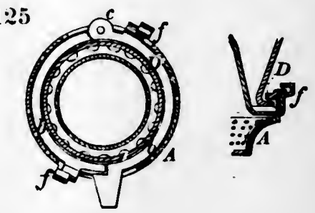
Fig. 1



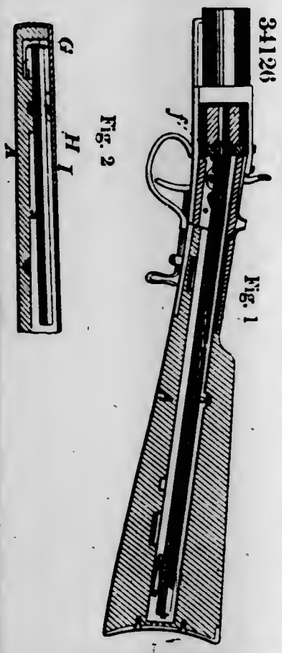
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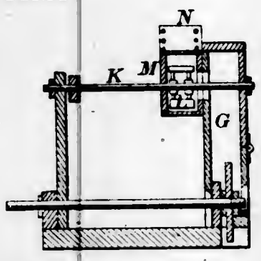
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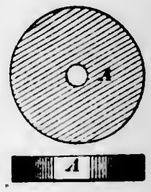
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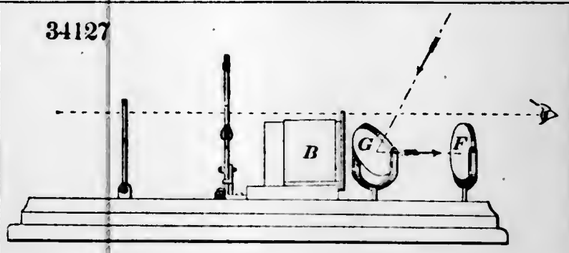
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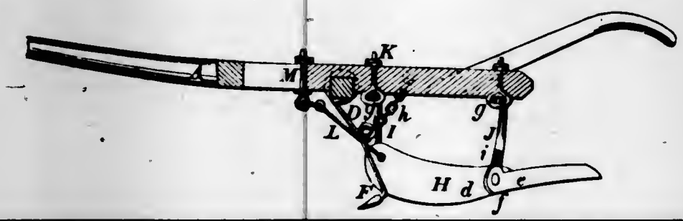
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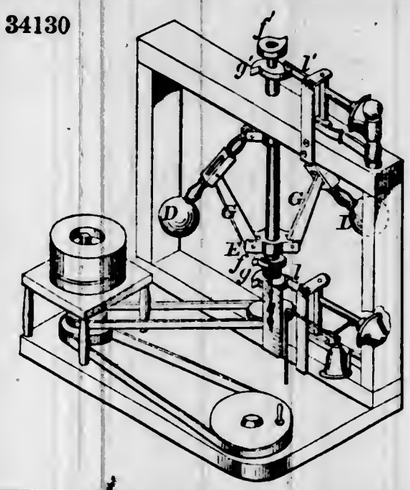
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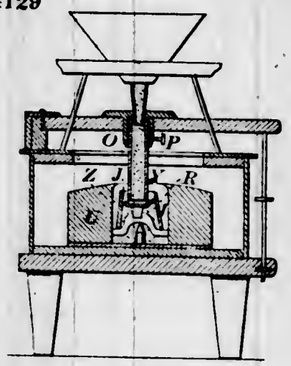
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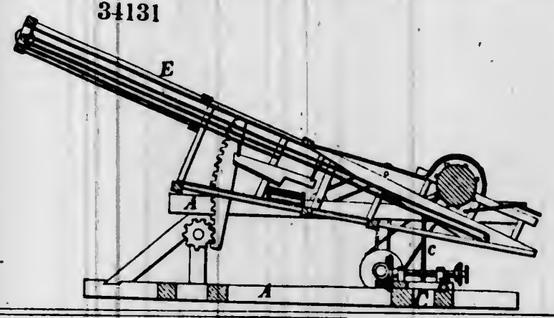
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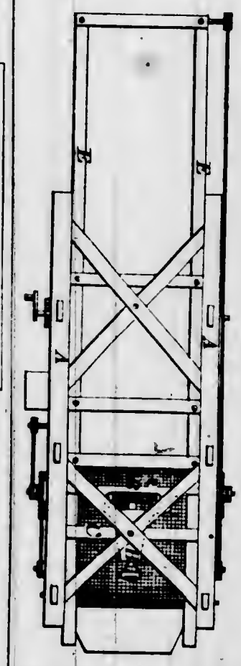
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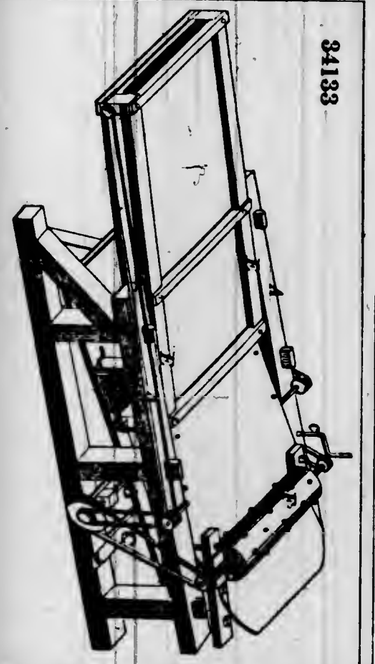
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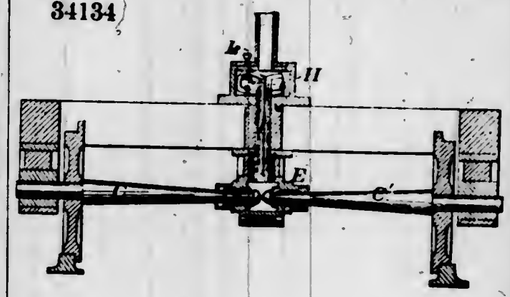
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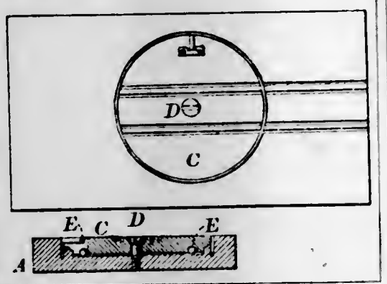
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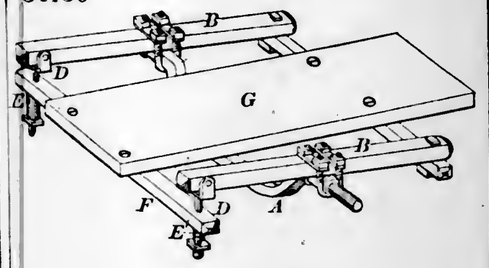
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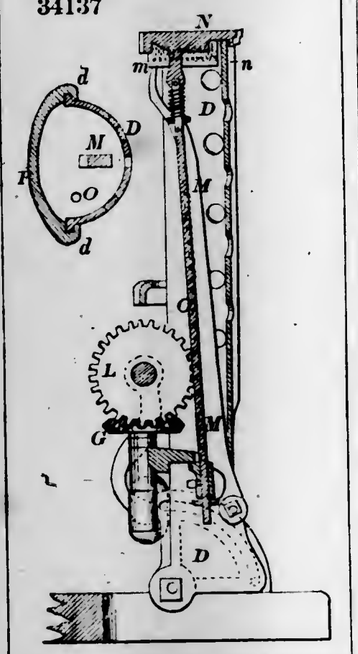
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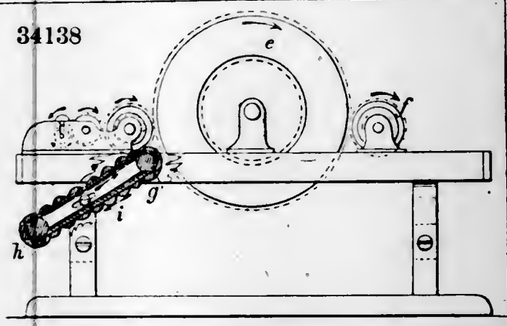
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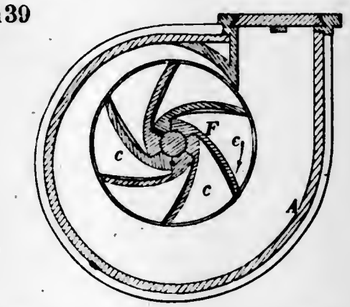
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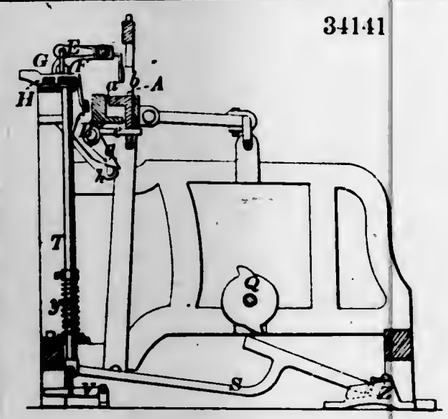
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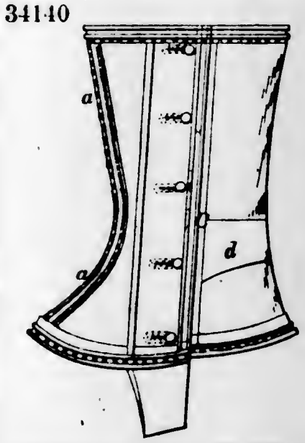
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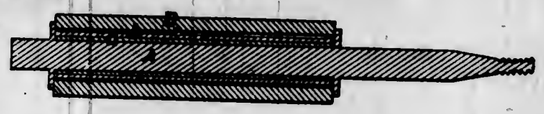
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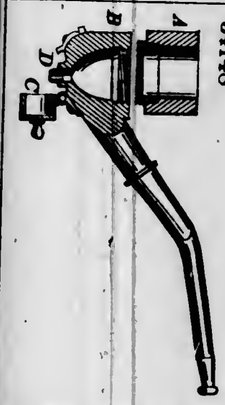
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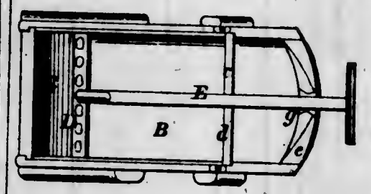
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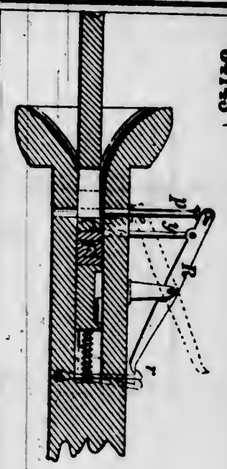
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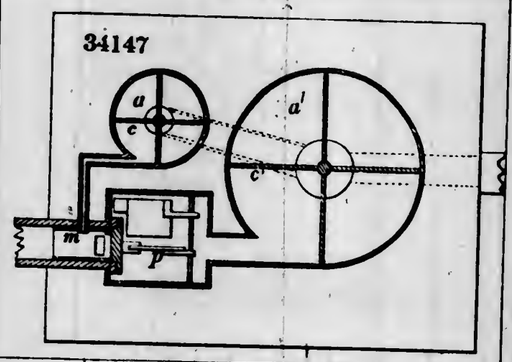
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34143



34147



34145

Fig. 1

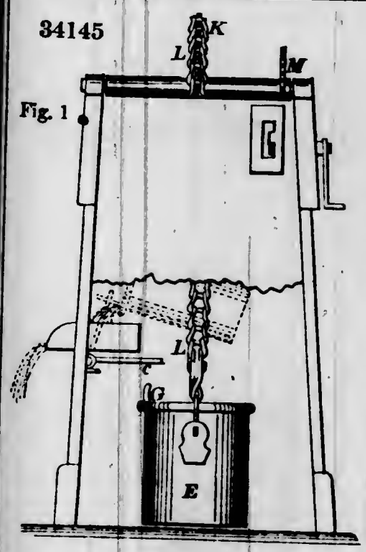
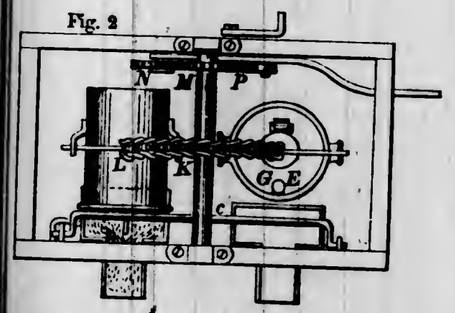
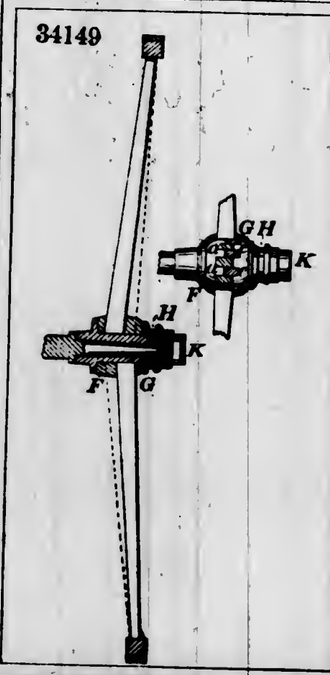


Fig. 2



34149



34150

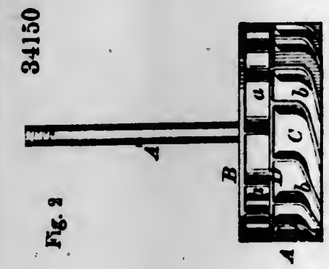


Fig. 2

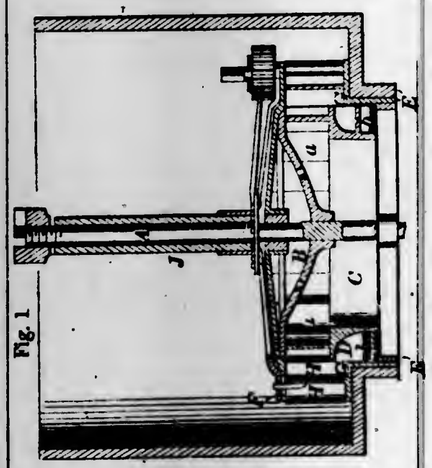
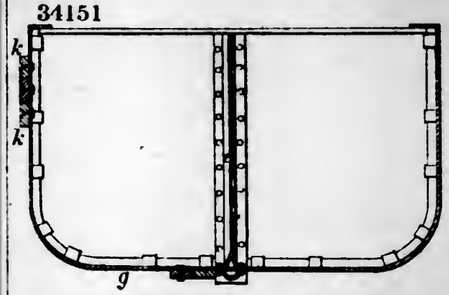
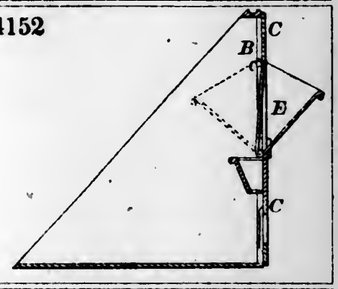


Fig. 1

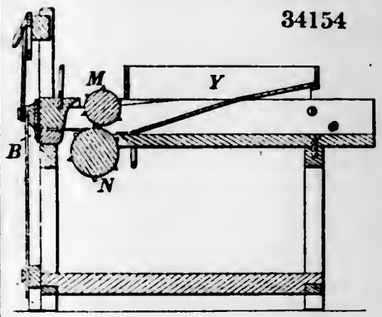
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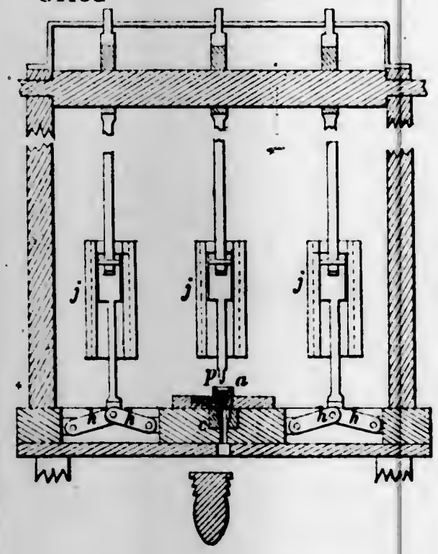
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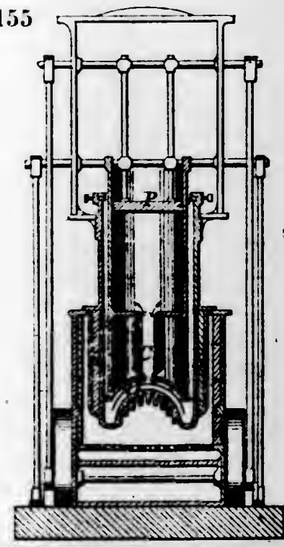
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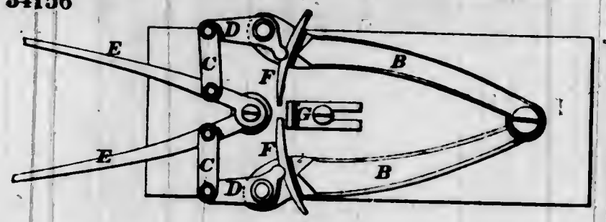
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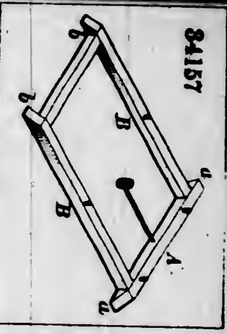
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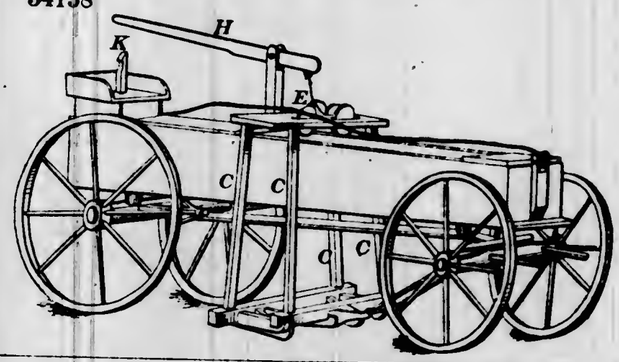
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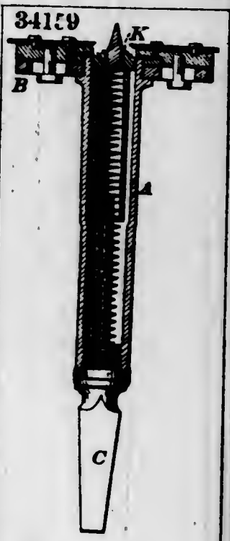
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Fig. 1

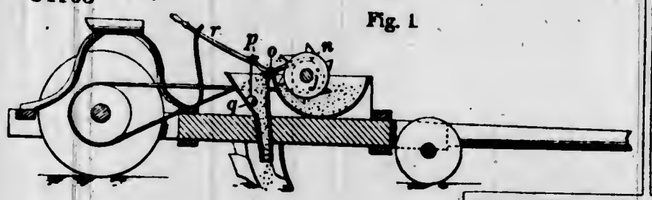
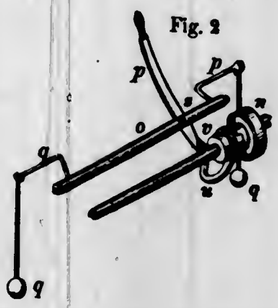
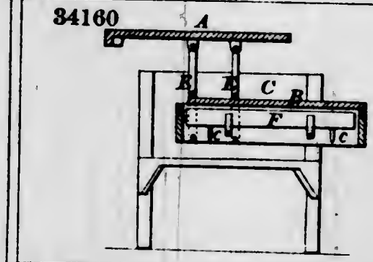


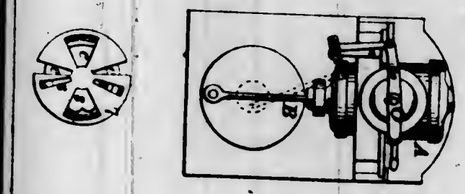
Fig. 2



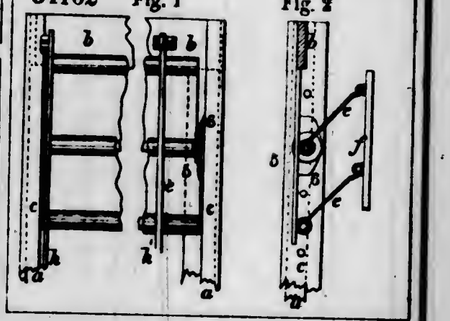
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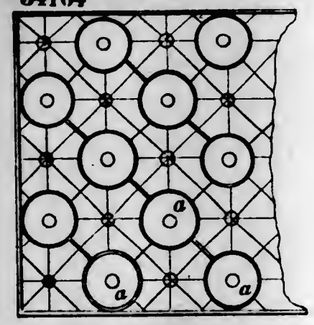
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34162 Fig. 1 Fig. 2



34164



34165

Fig. 1

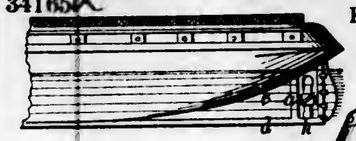


Fig. 3

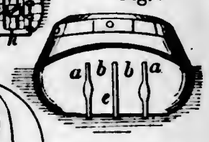
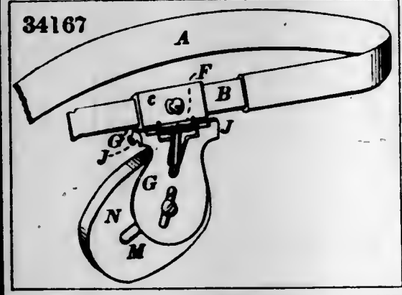
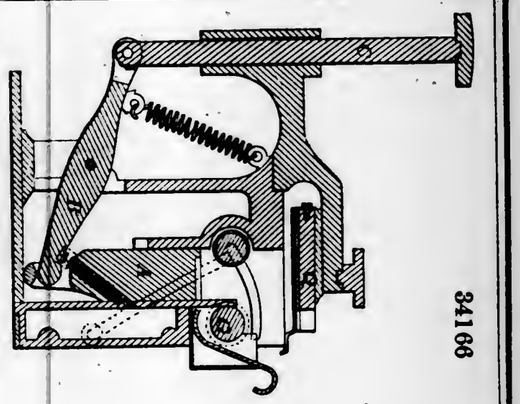


Fig. 2

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34168

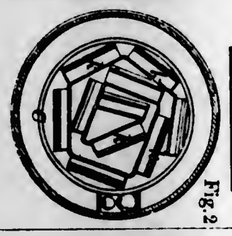


Fig. 2

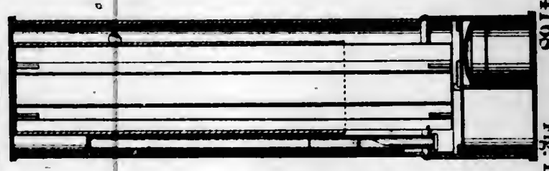
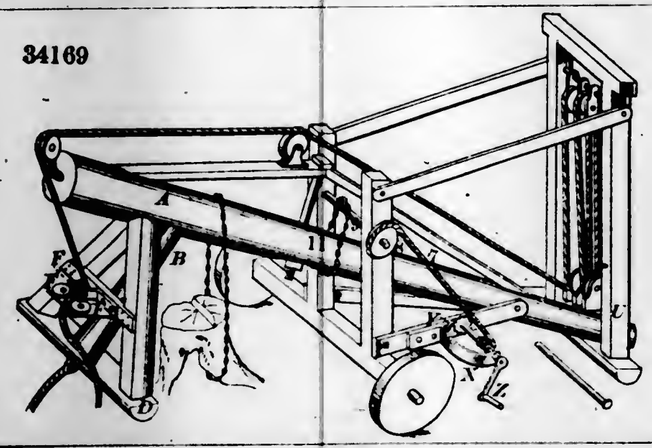


Fig. 1

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34170

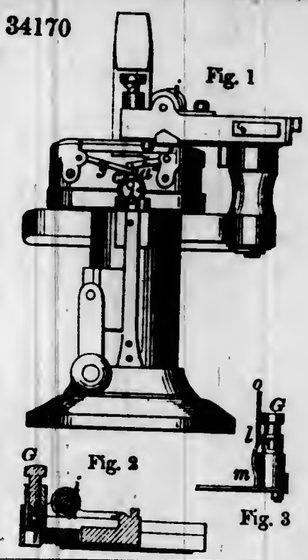
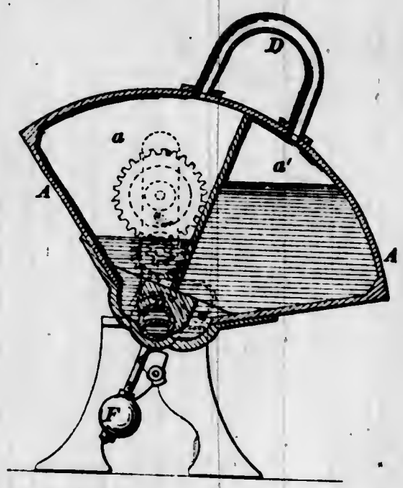


Fig. 1

Fig. 2

Fig. 3

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34171

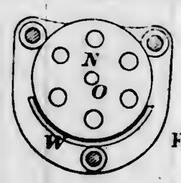


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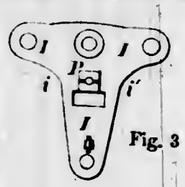


Fig. 3

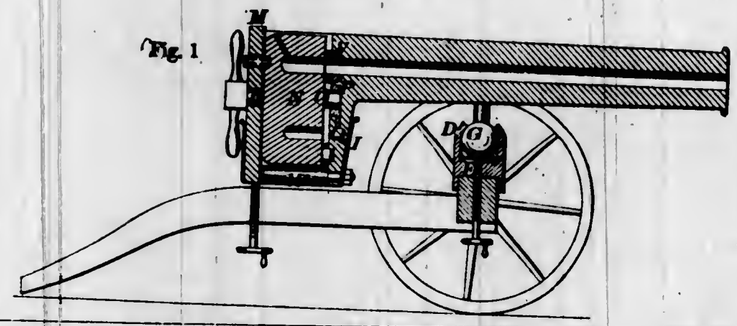


Fig. 1

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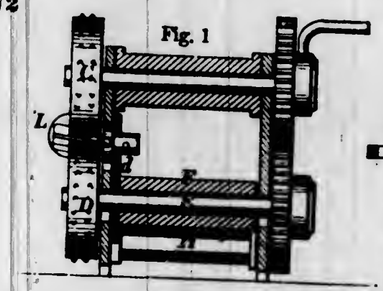


Fig. 1

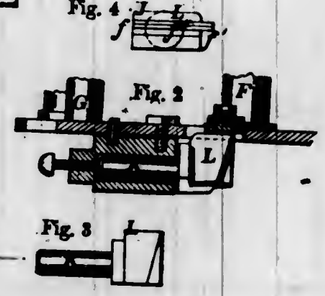


Fig. 4

Fig. 2

Fig. 3

34176

Fig. 2

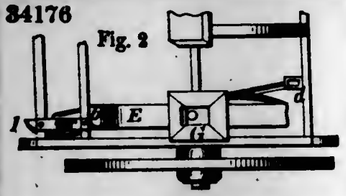
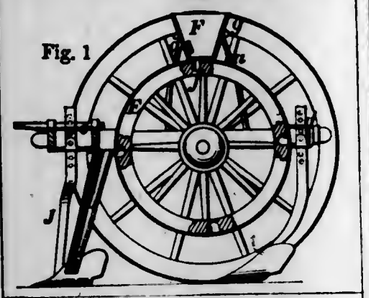
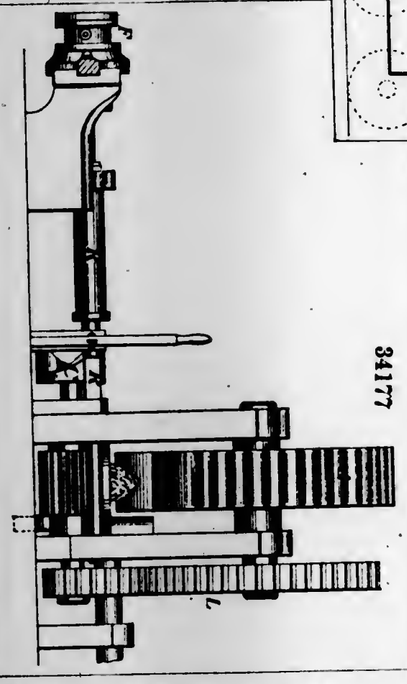


Fig. 1





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Fig. 1

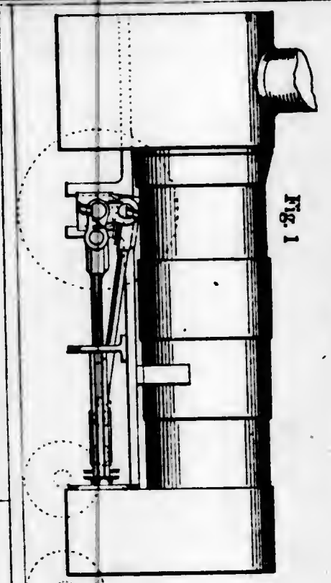
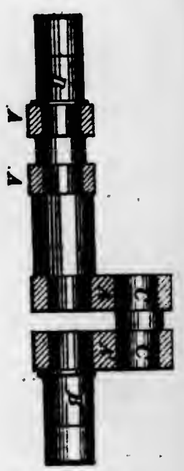


Fig. 3



34178

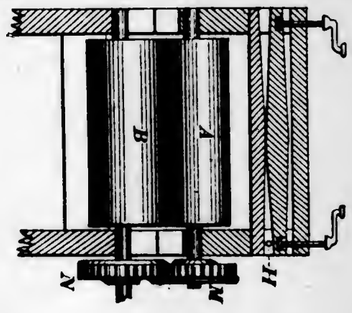
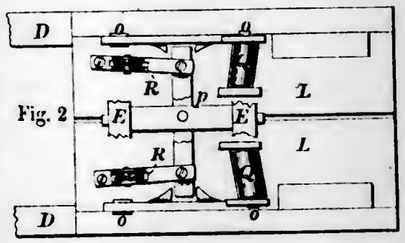
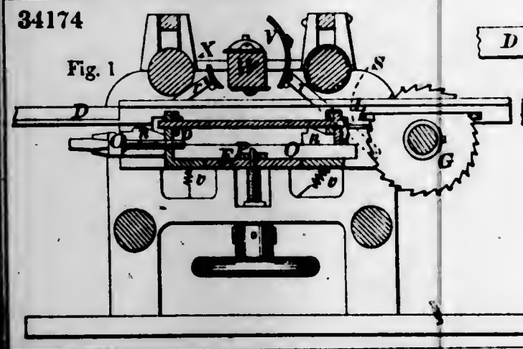


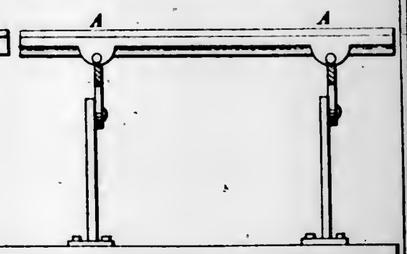
Fig. 2



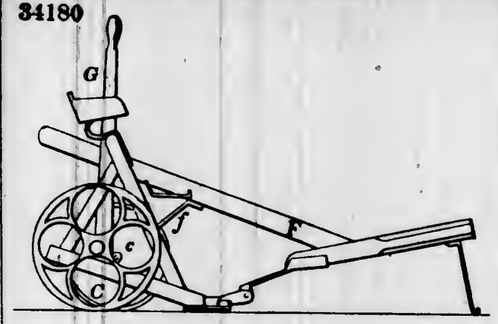
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Fig. 1

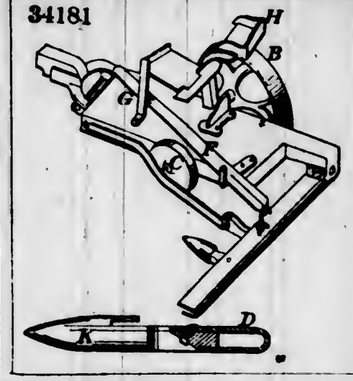




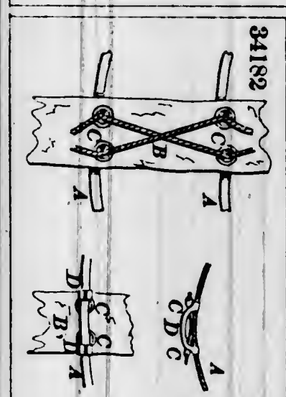
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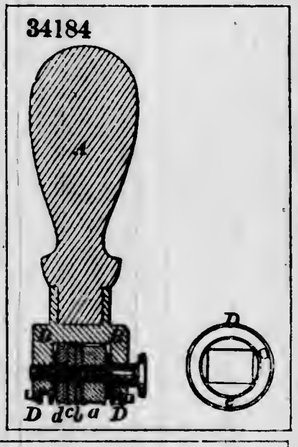
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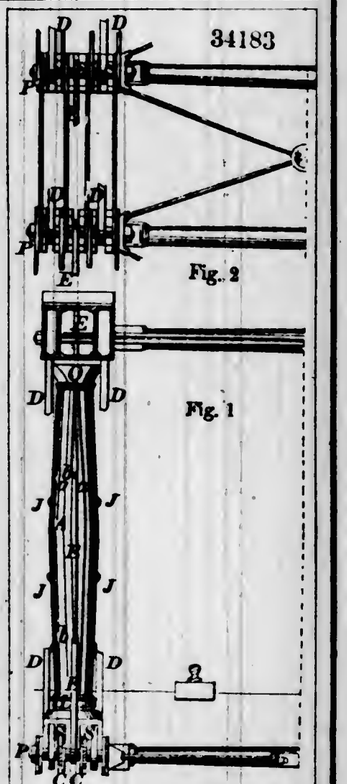


Fig. 2

Fig. 1

34186

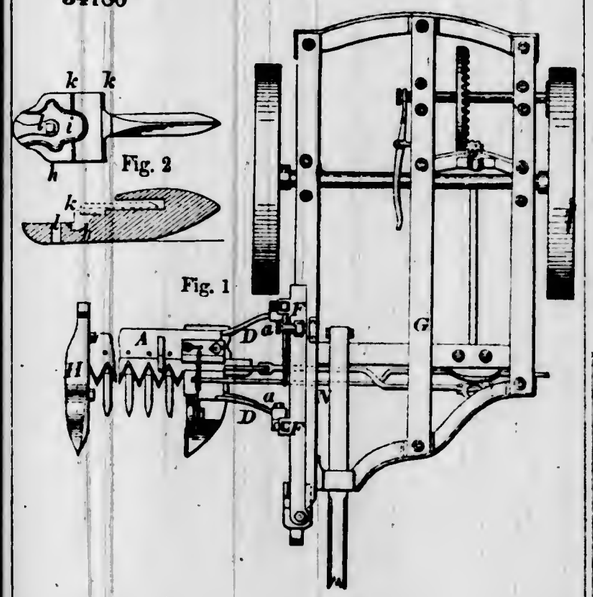
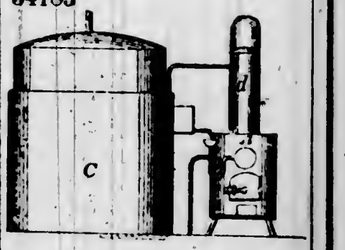


Fig. 2

Fig. 1

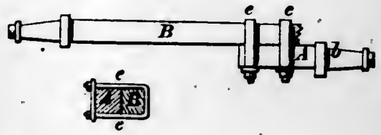
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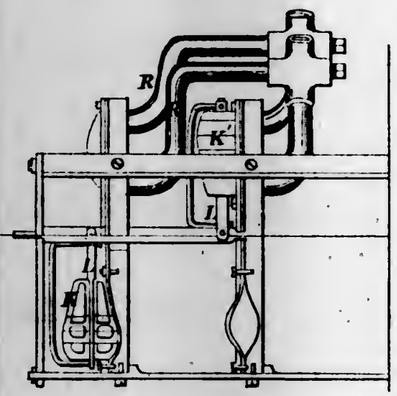
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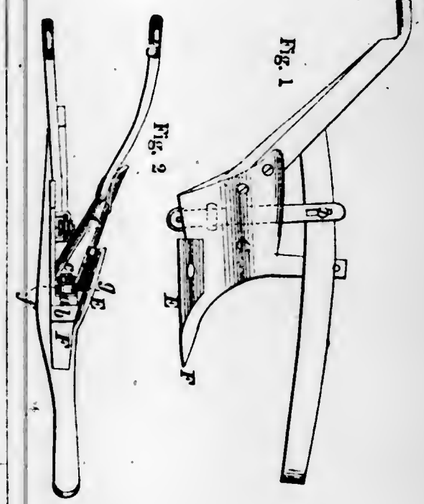
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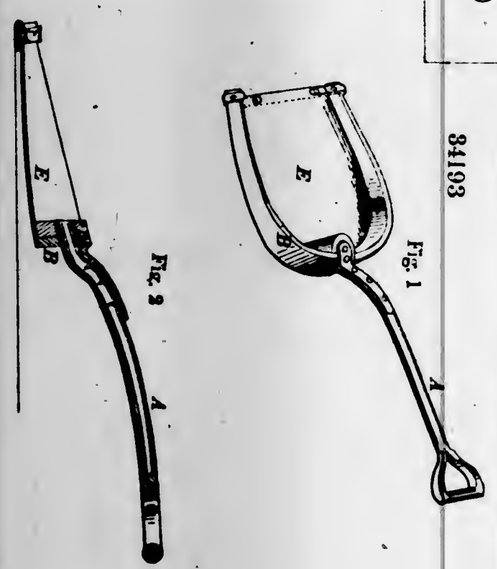
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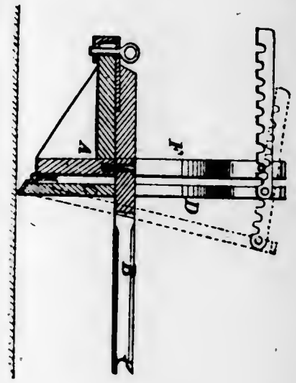
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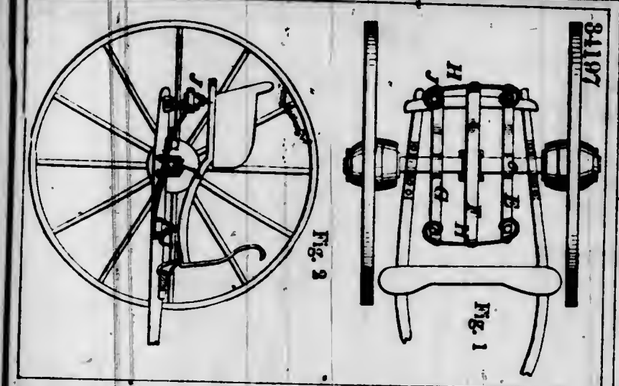
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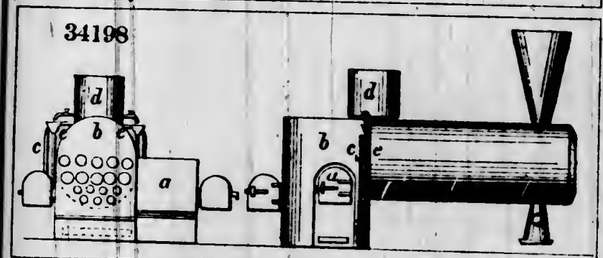
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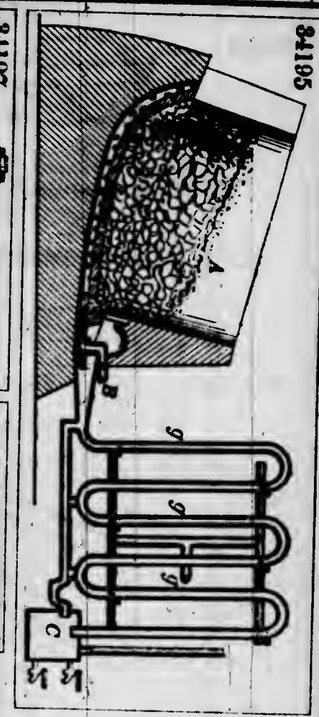
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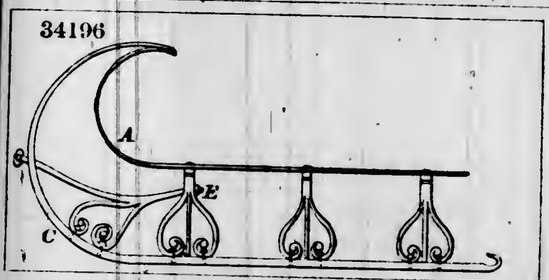
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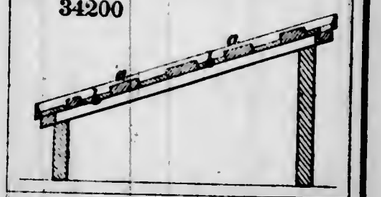
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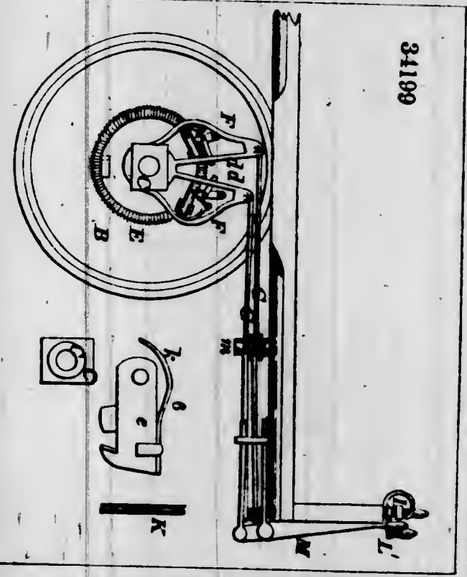
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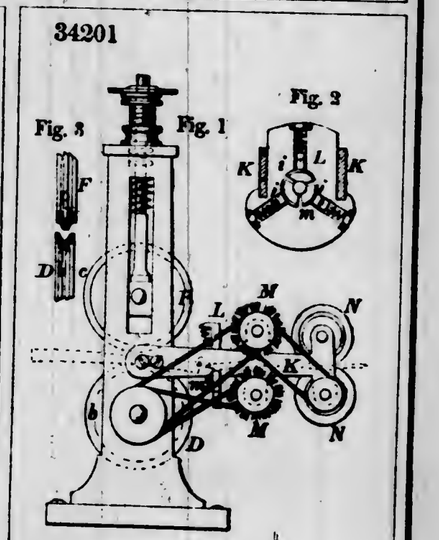
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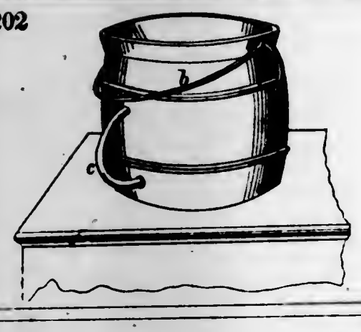
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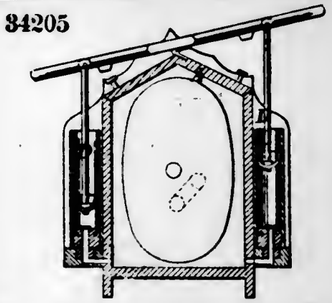
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34202



34205



34204 Fig. 1

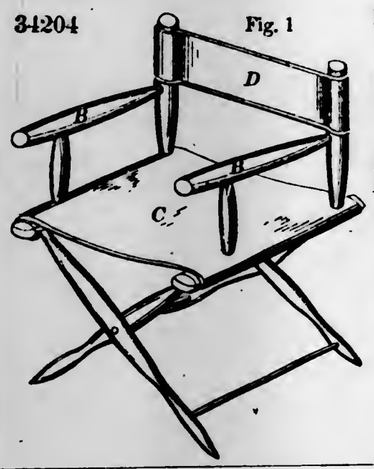
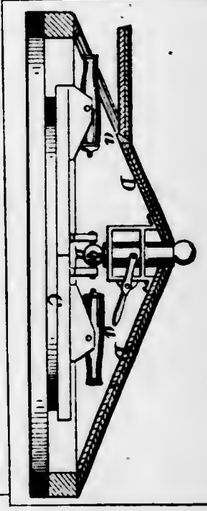


Fig. 2



34206



34209 Fig. 1

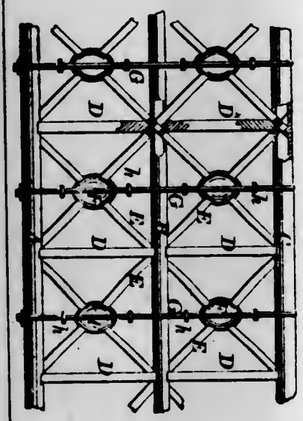
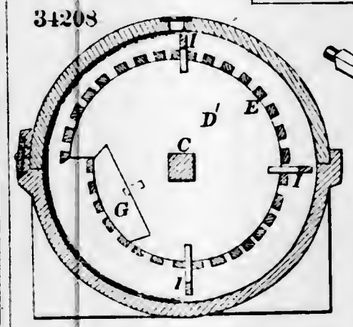
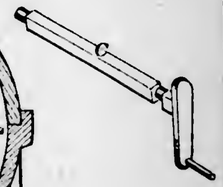


Fig. 2

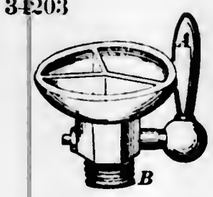


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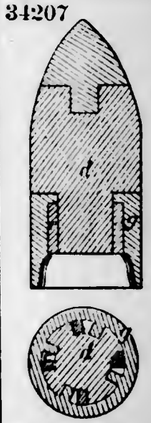




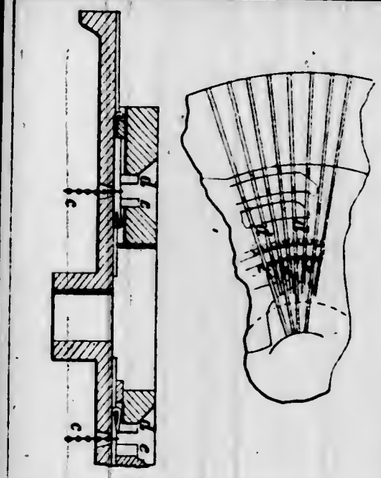
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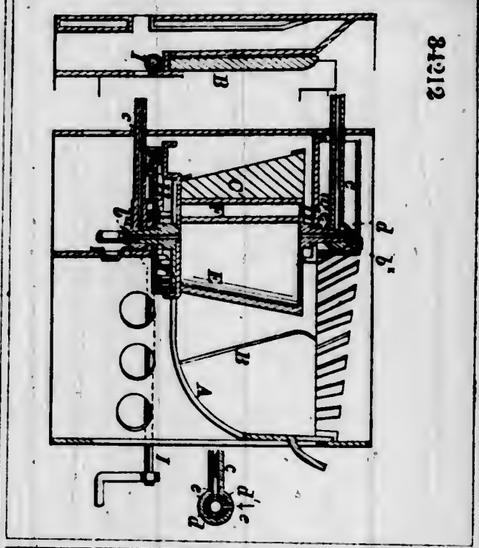
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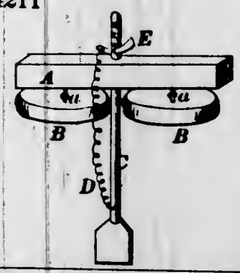
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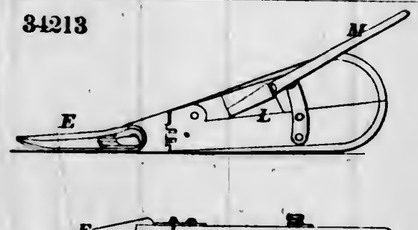
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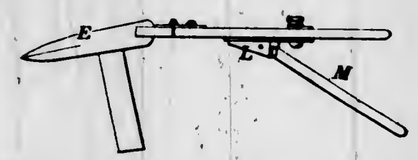


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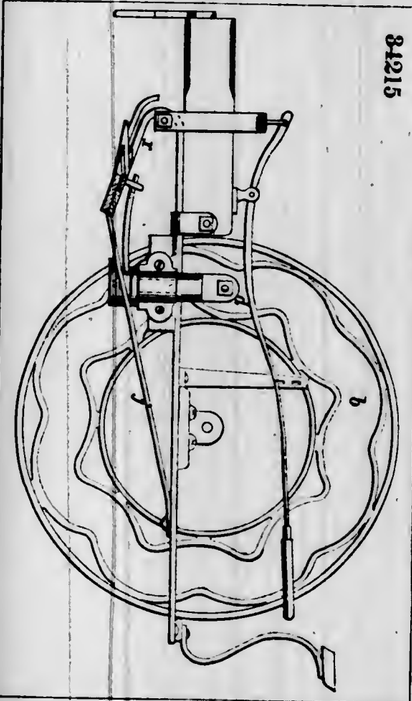


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34214 Fig. 1

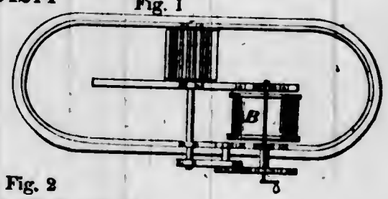


Fig. 2

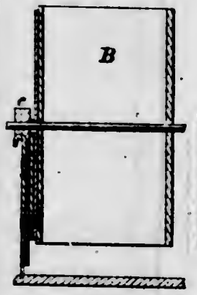
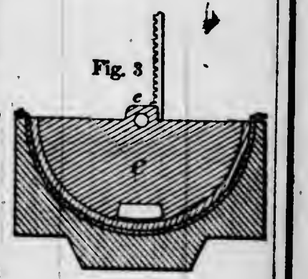
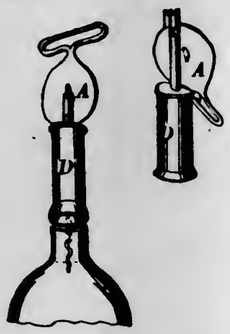


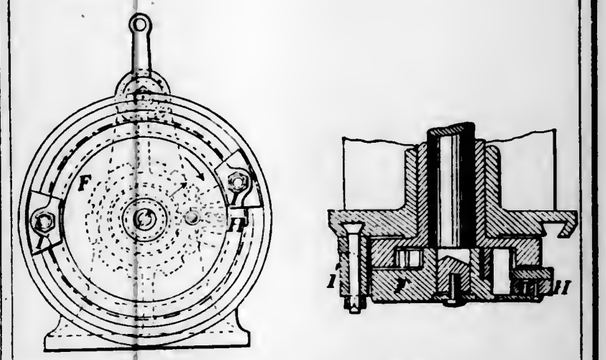
Fig. 3



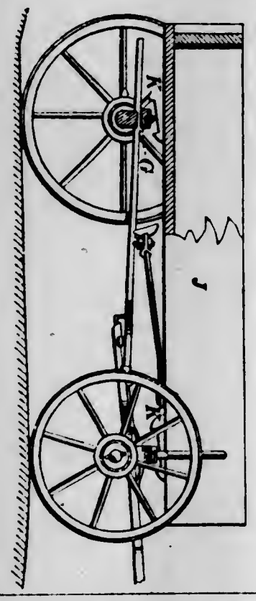
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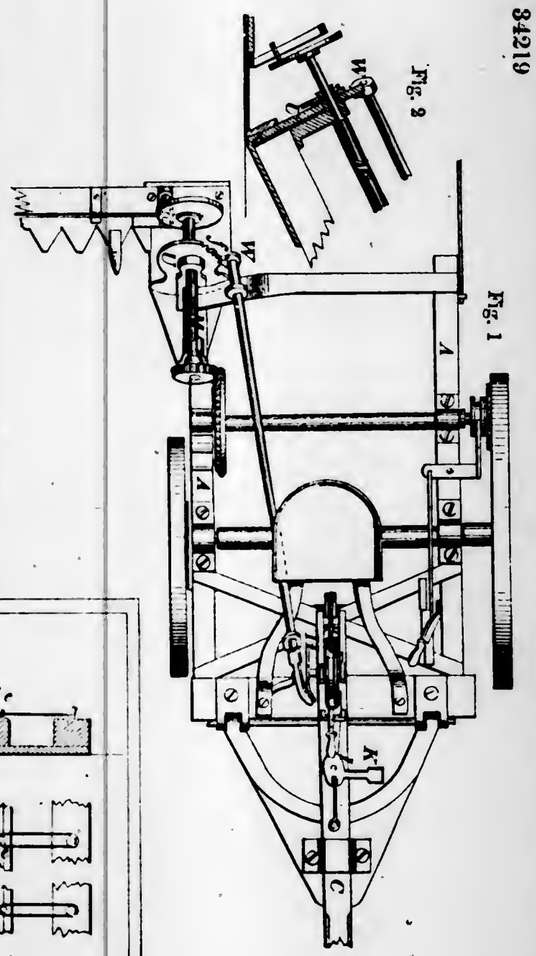
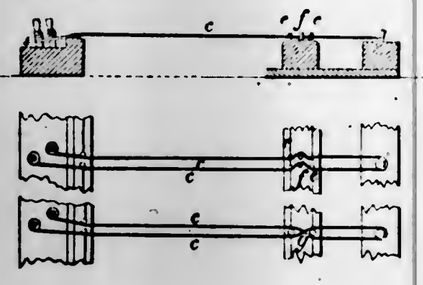


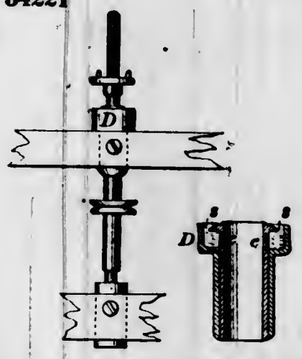
Fig. 3

Fig. 1

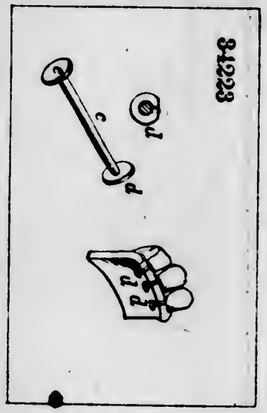
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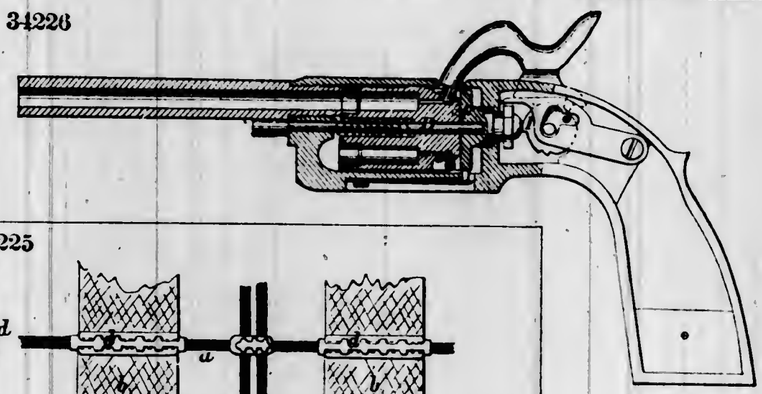
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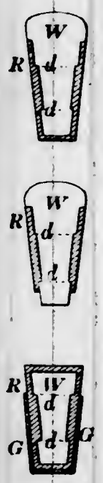


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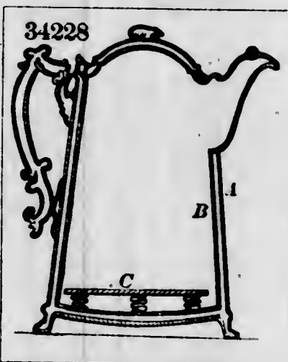


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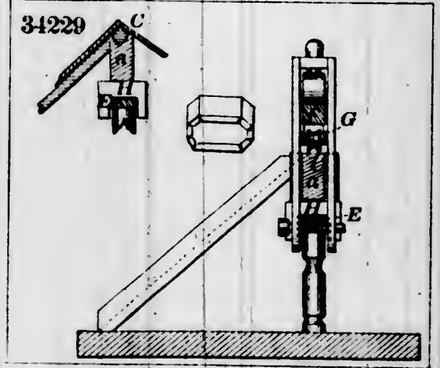
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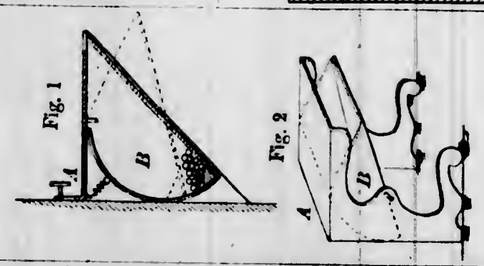
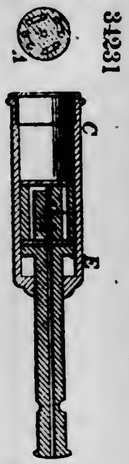


Fig. 1

Fig. 2

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Fig. 1

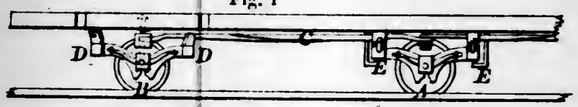
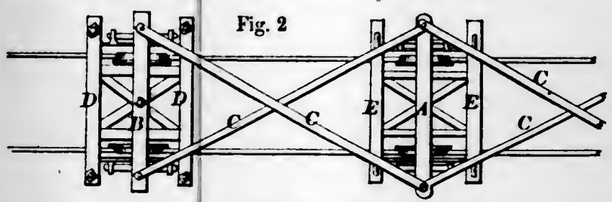


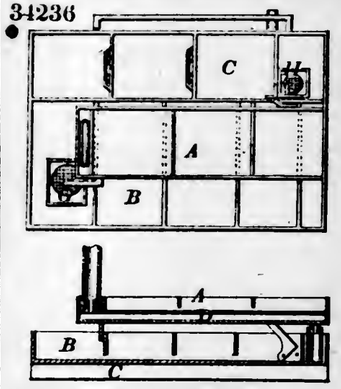
Fig. 2



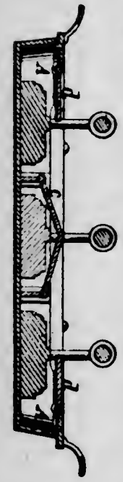
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Fig. 2

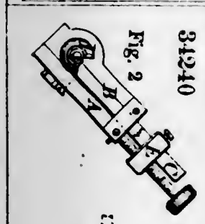
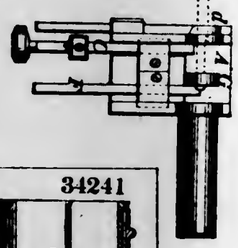
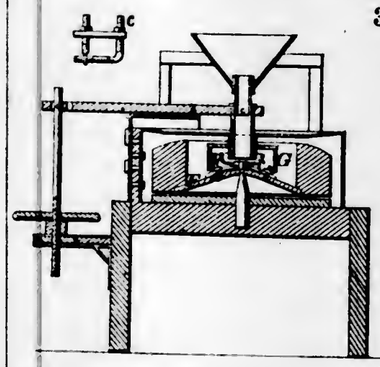


Fig. 1

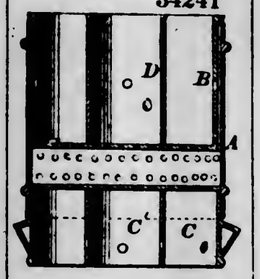


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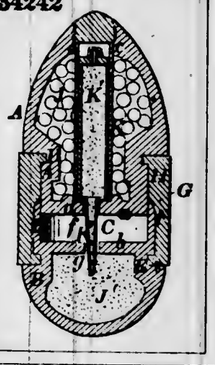
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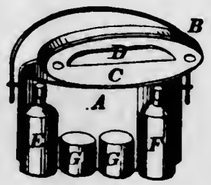
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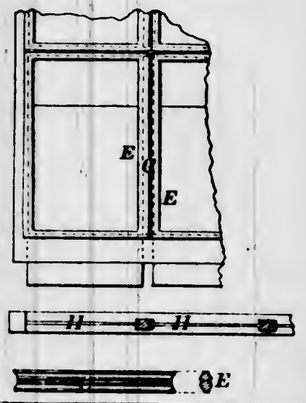
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Fig. 1

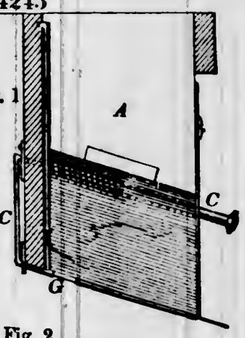
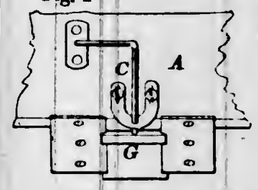
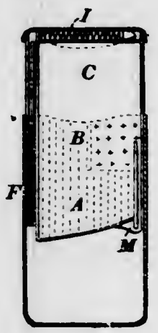


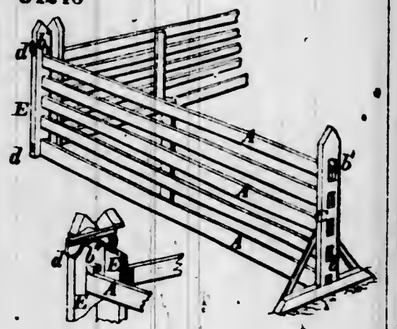
Fig. 2



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Fig. 1

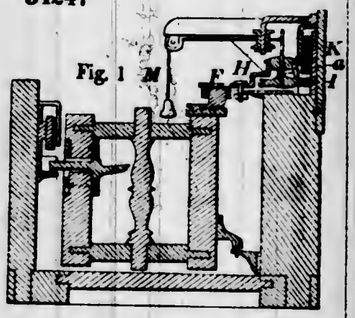
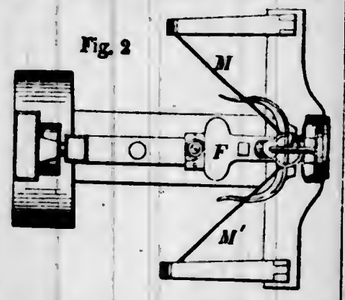
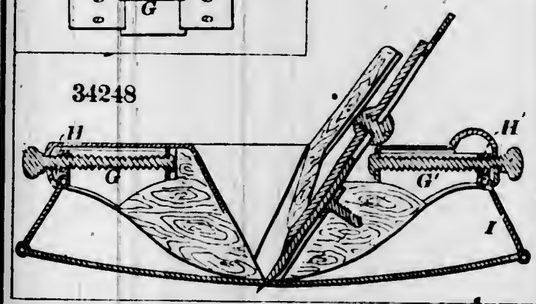


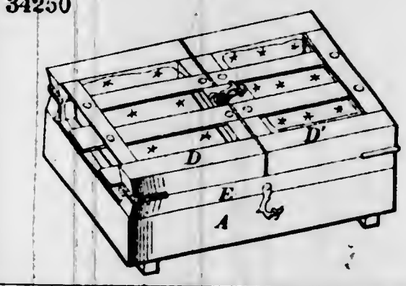
Fig. 2



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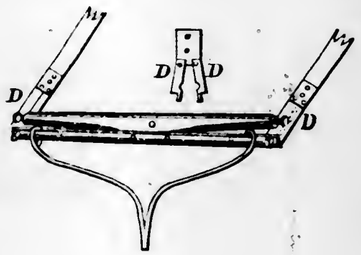
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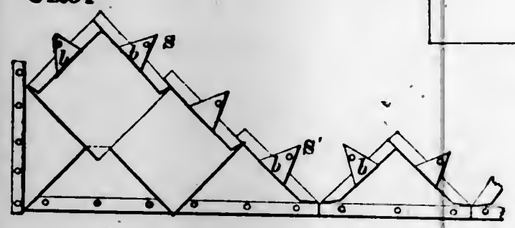
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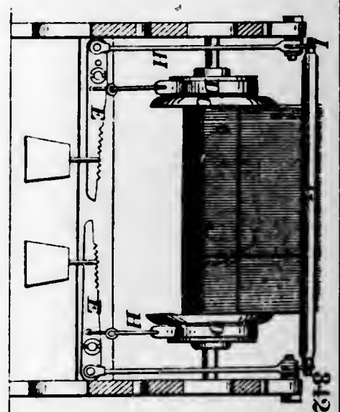
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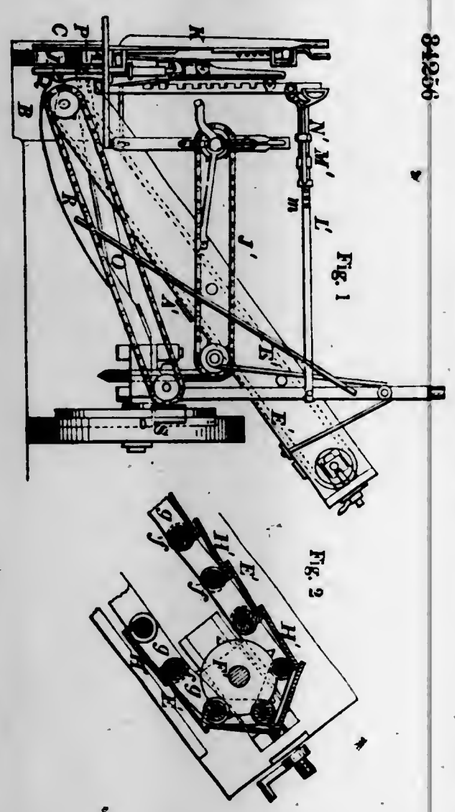
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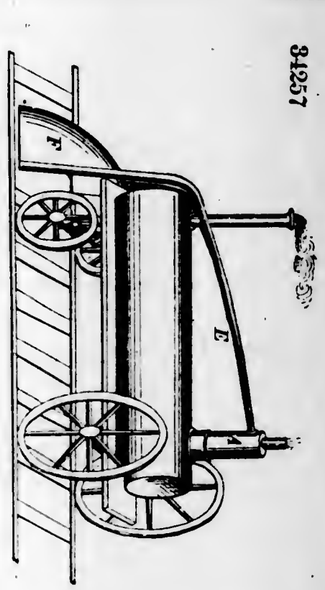
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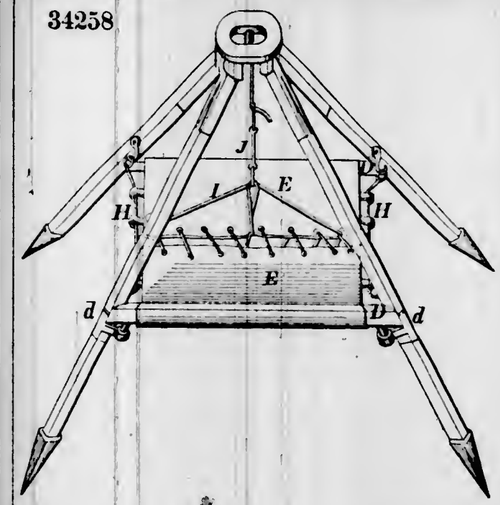
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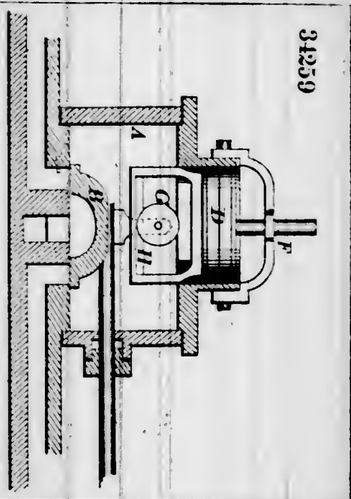
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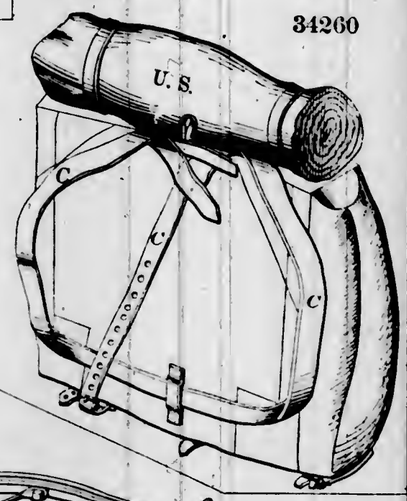
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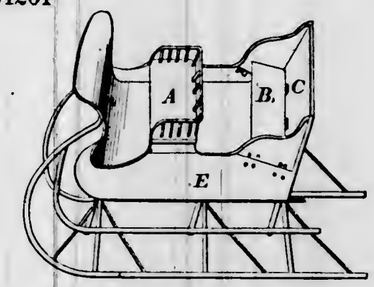
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Fig. 1

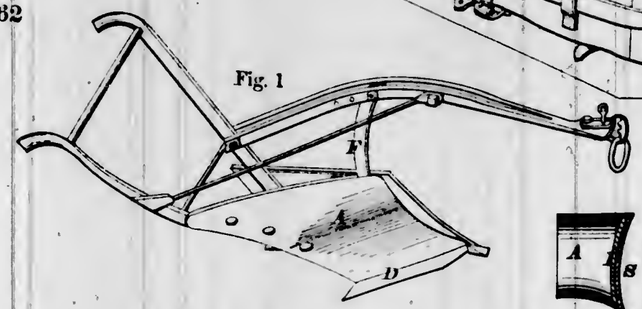
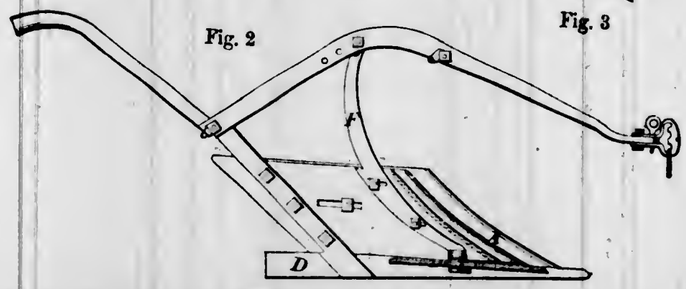
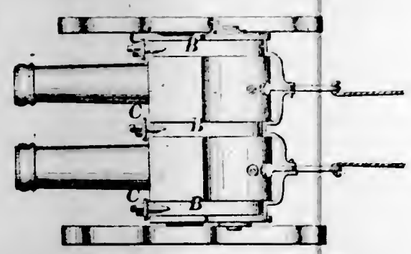


Fig. 3

Fig. 2



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Fig. 1

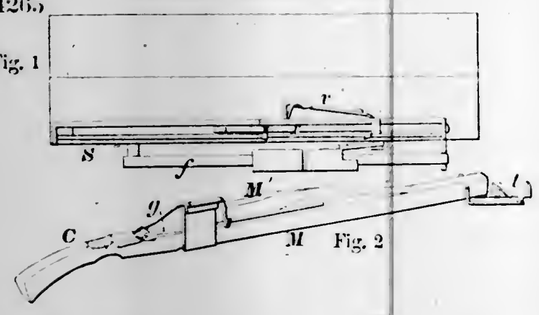
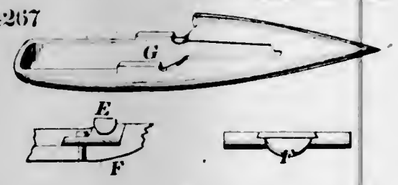
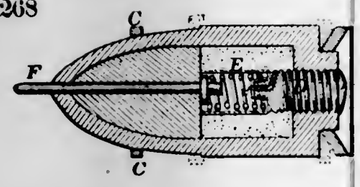


Fig. 2

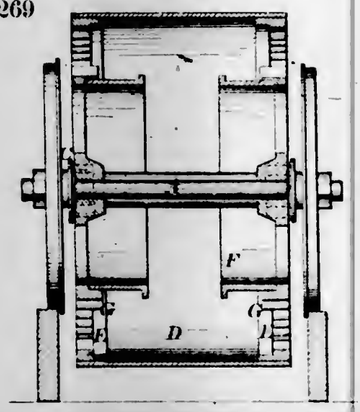
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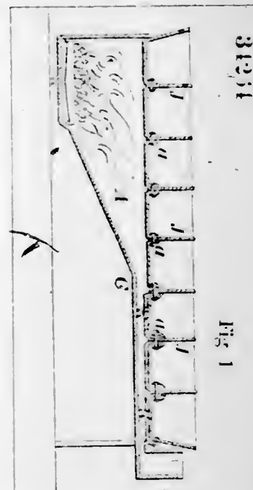


Fig. 1

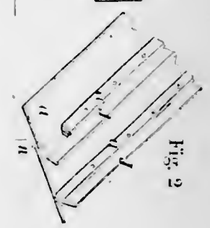
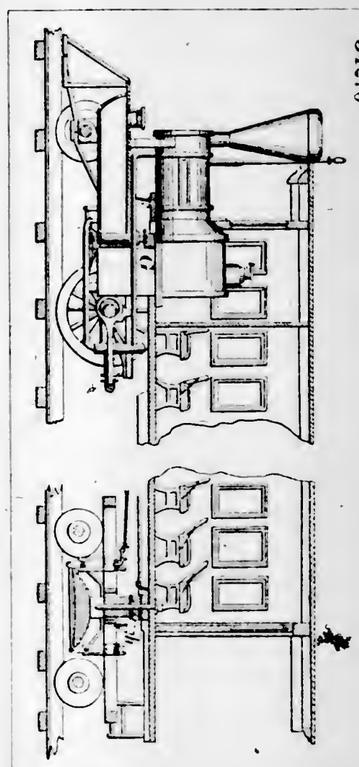
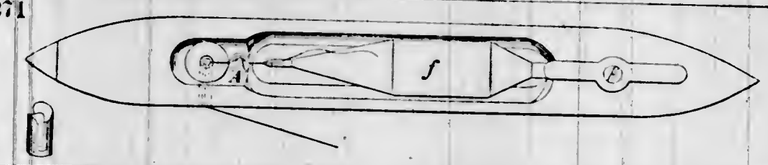


Fig. 2

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Fig. 1

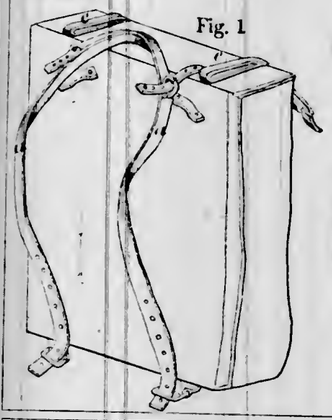
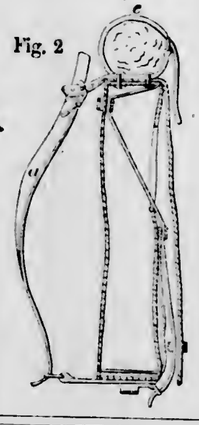


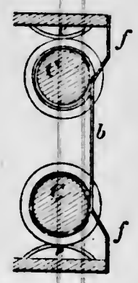
Fig. 2



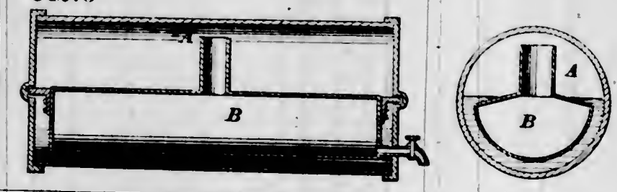
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Fig. 1

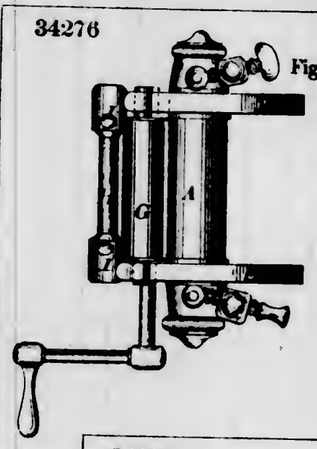
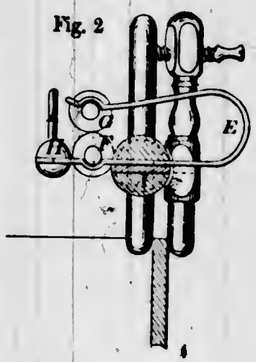
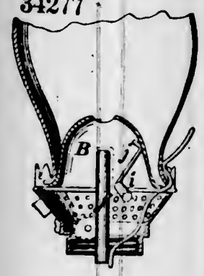


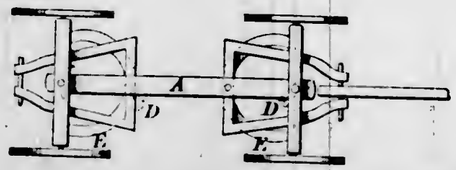
Fig. 2



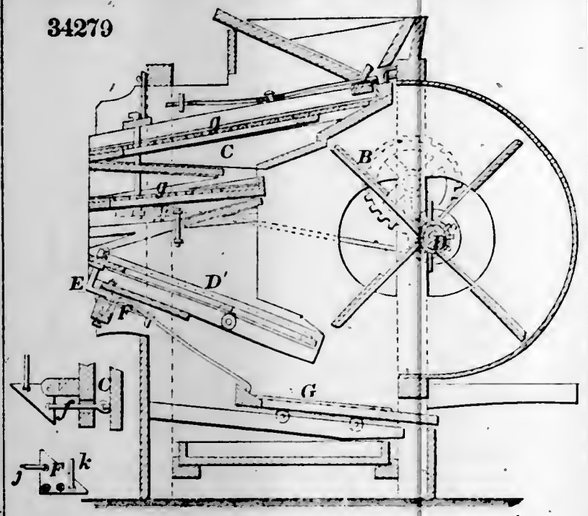
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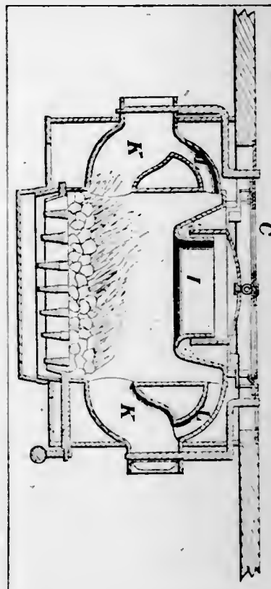
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Fig. 1

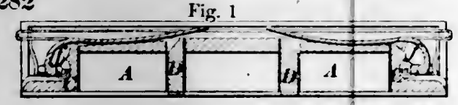
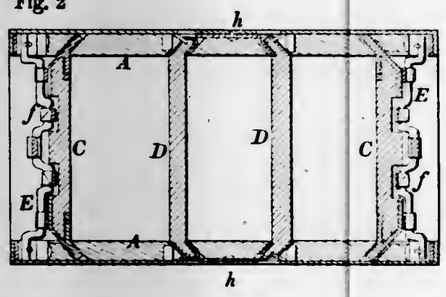


Fig. 2



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Fig. 1

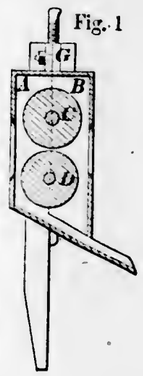
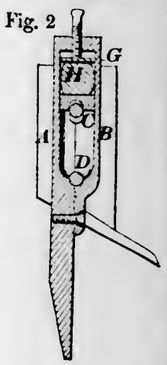
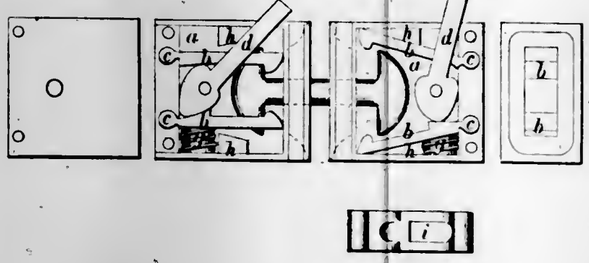


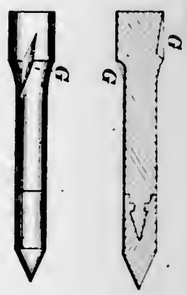
Fig. 2



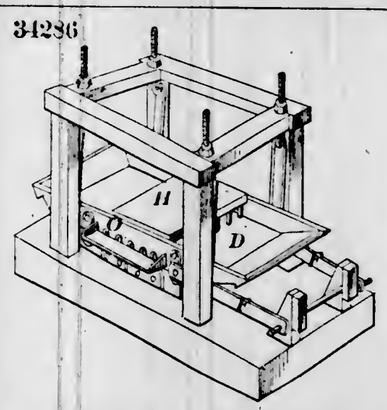
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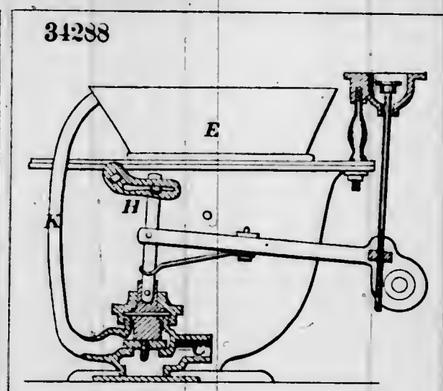
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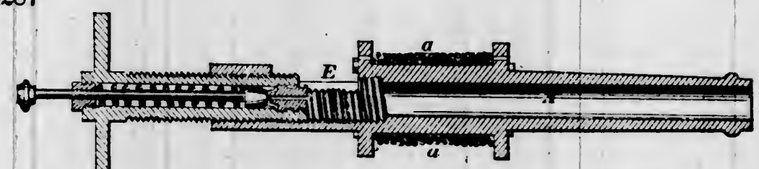
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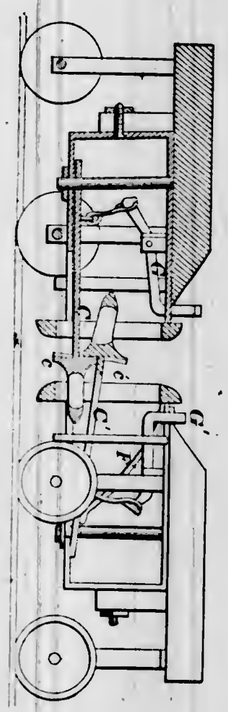
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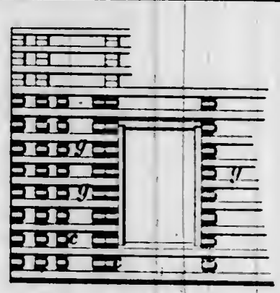
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Fig. 1

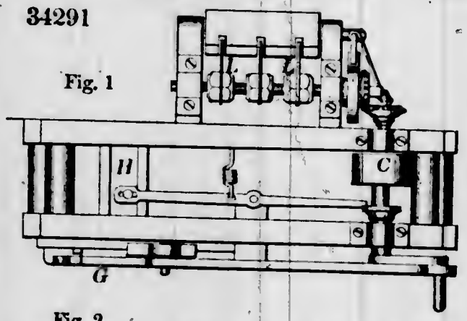
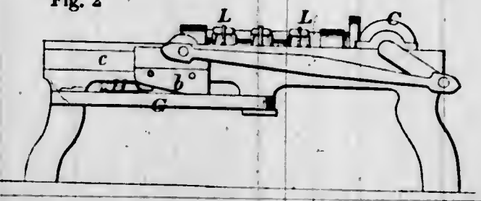
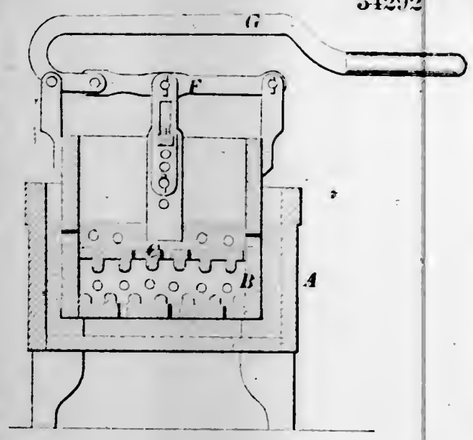


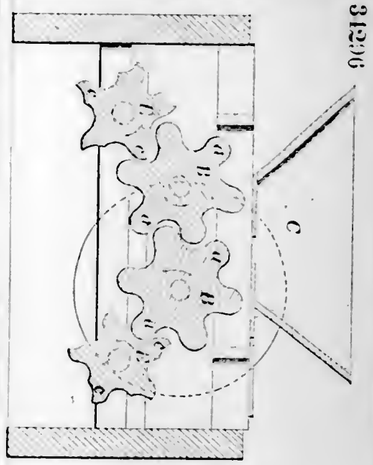
Fig. 2



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Fig. 1

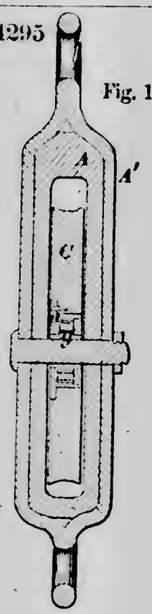
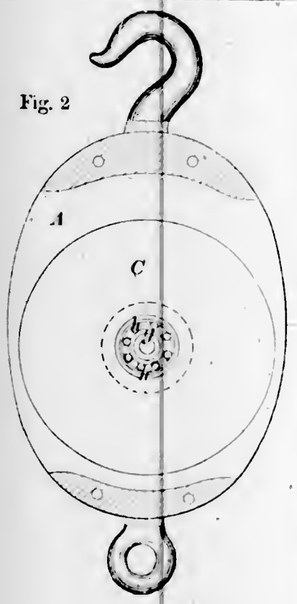
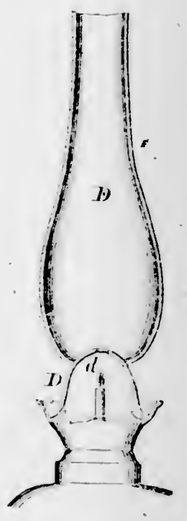


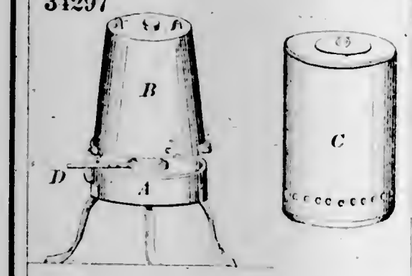
Fig. 2



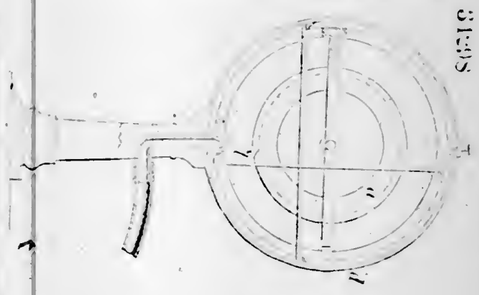
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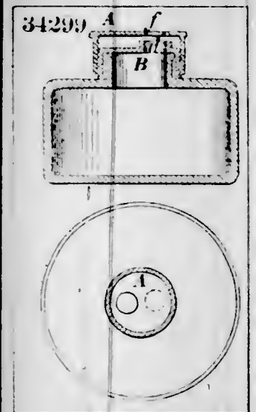
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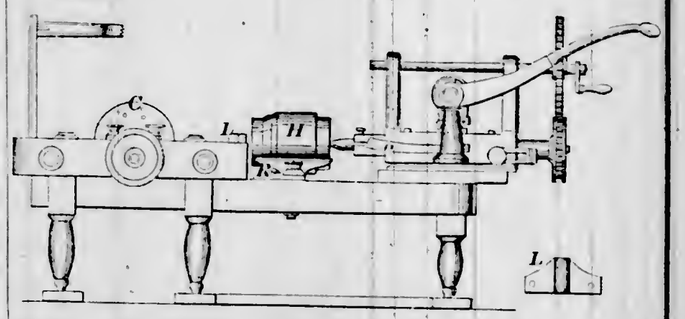
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Fig. 1

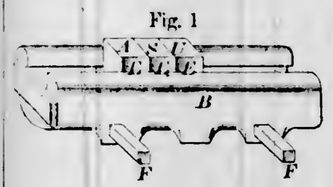
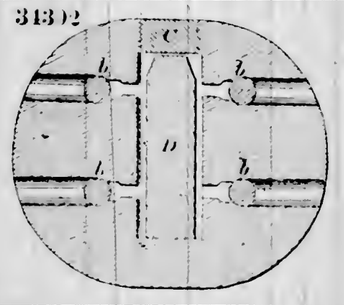


Fig. 2



34302



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Fig 1

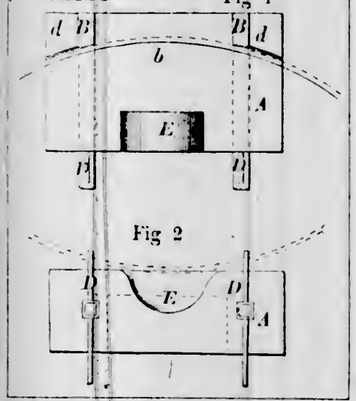
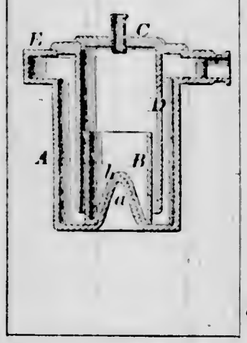
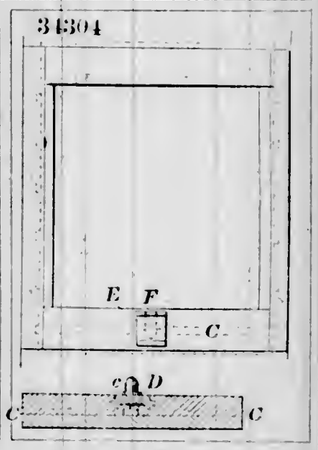


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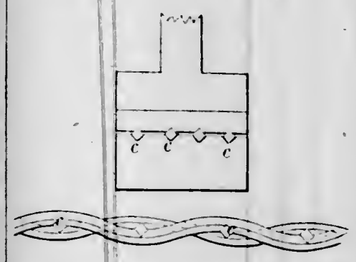
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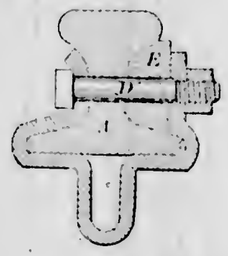
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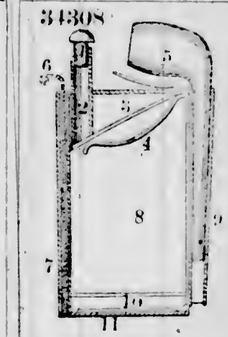
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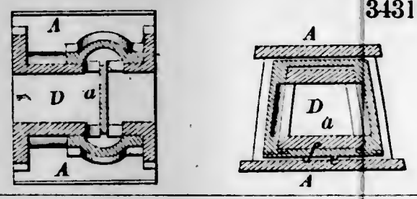


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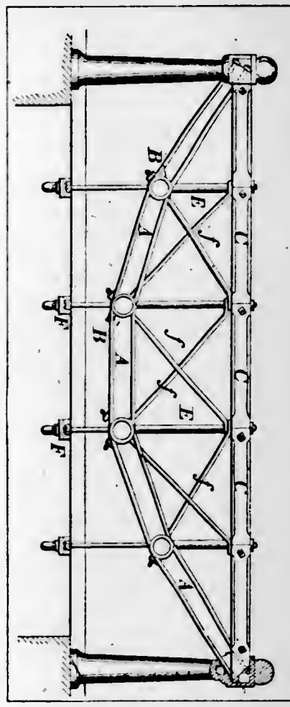


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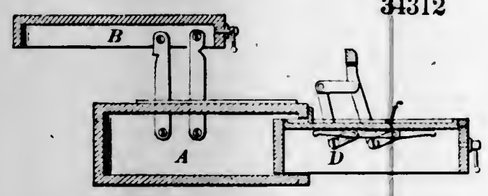
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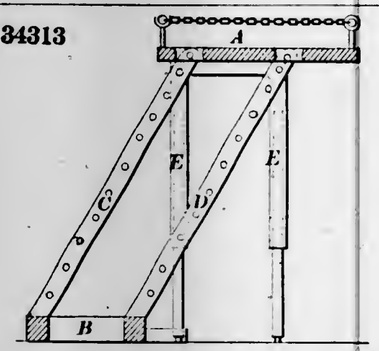
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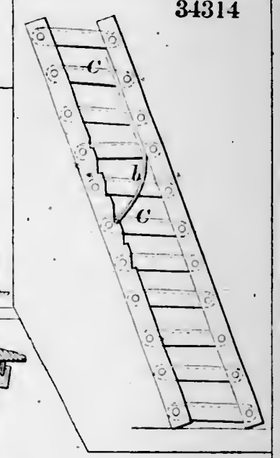
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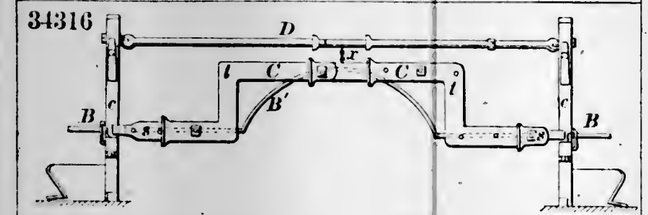
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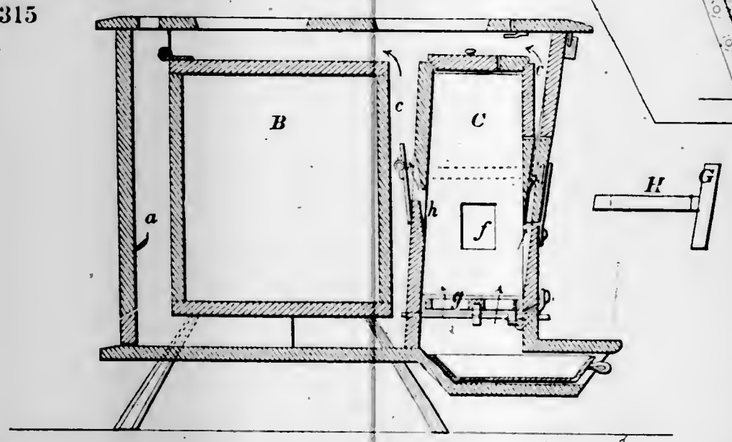
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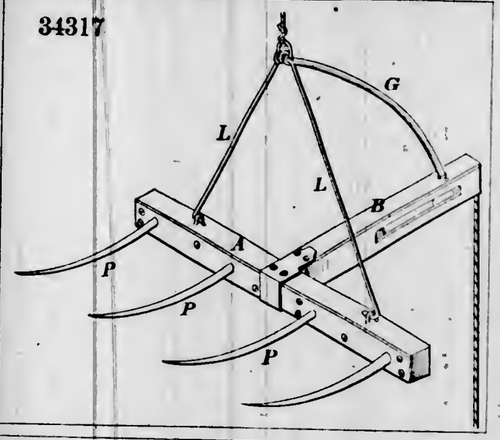
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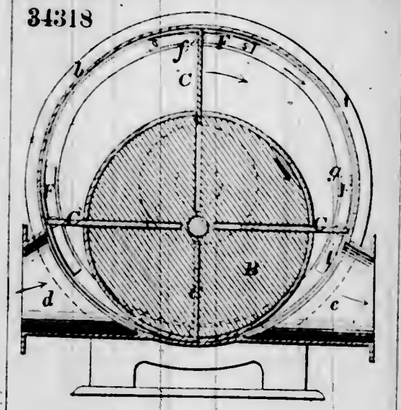
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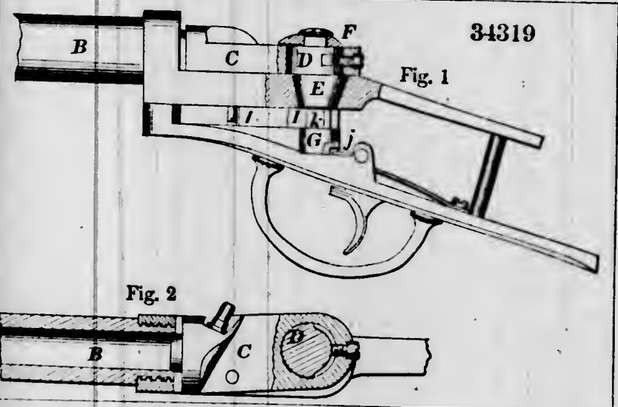
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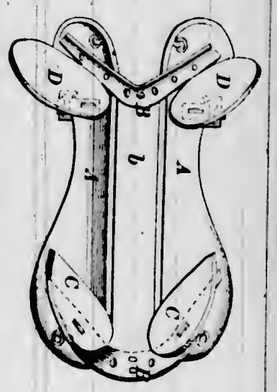
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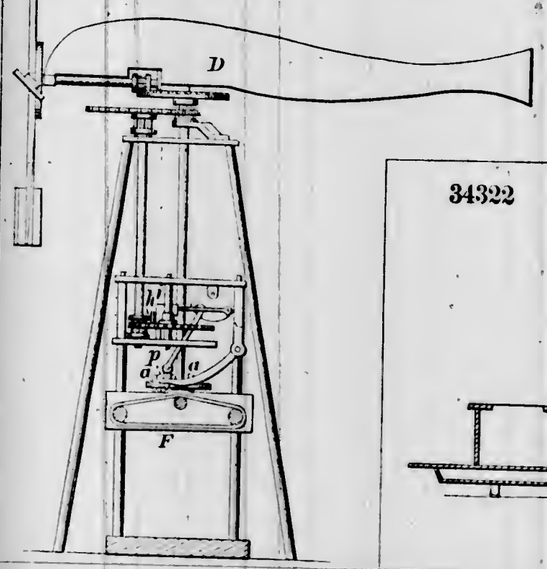
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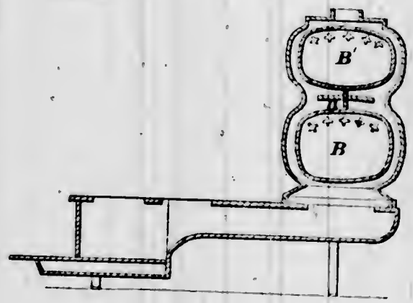
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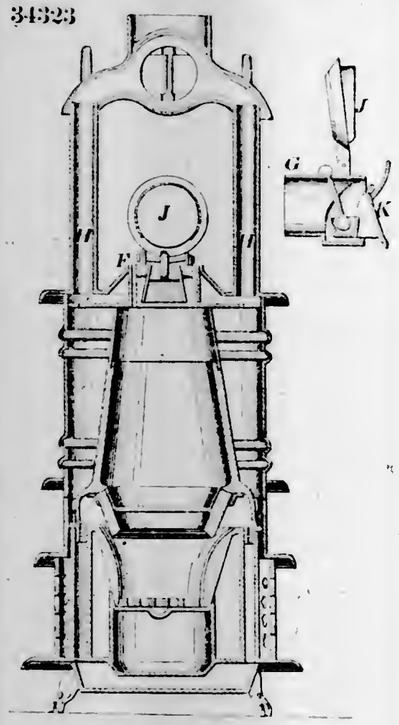
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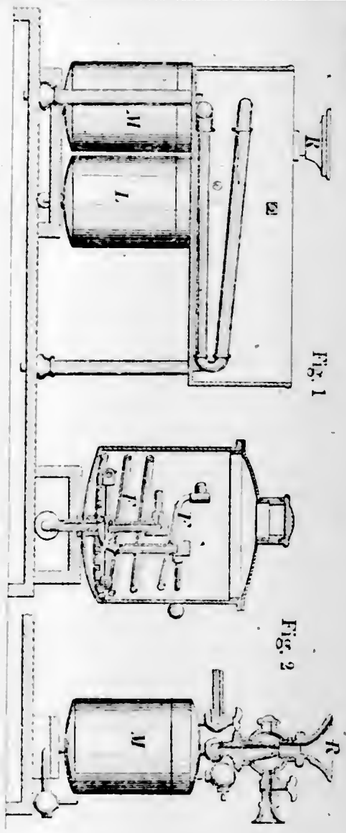
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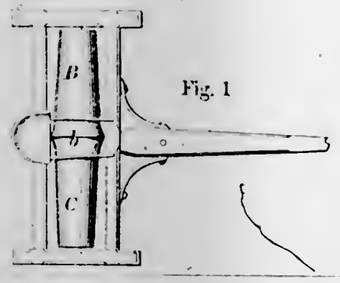
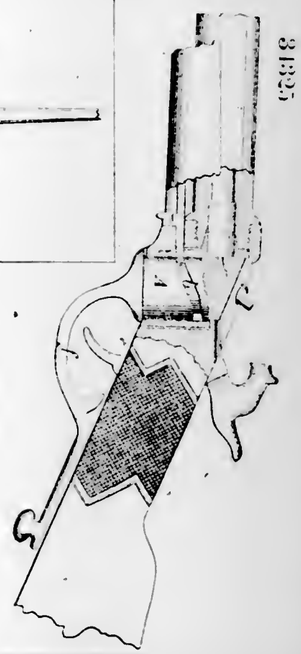


Fig. 1

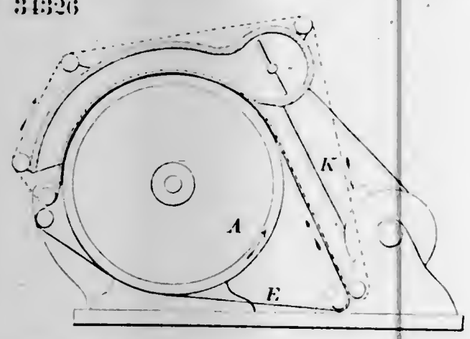


Fig. 2

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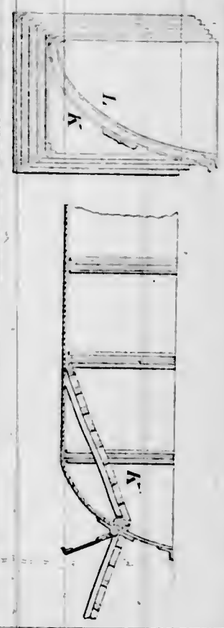
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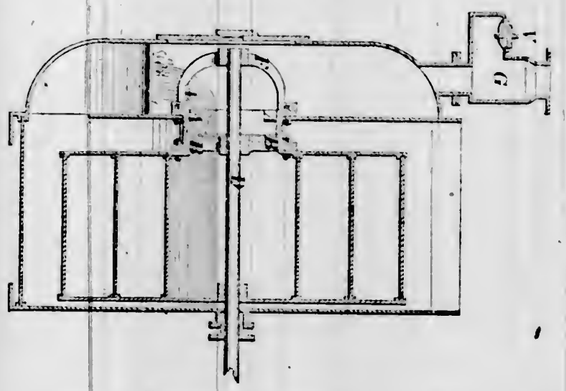
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Fig. 1

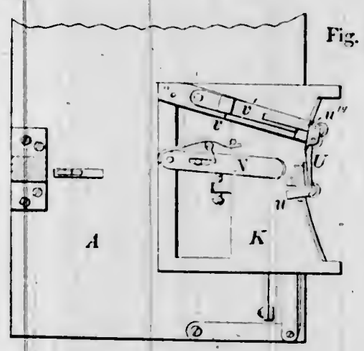
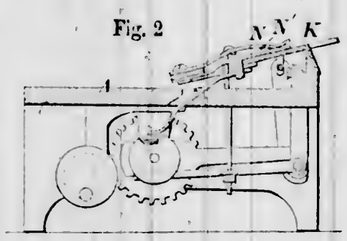
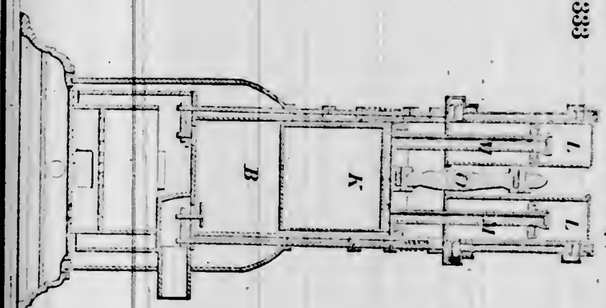


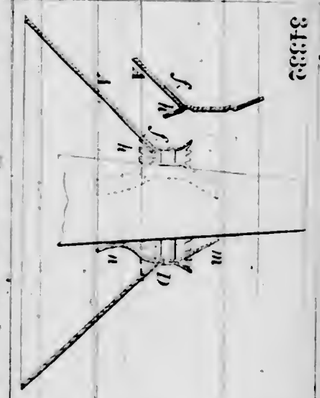
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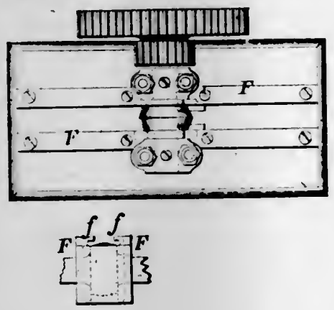
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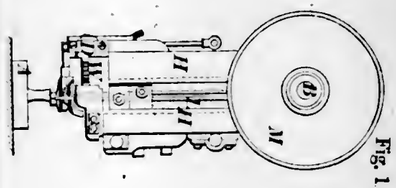


Fig. 1

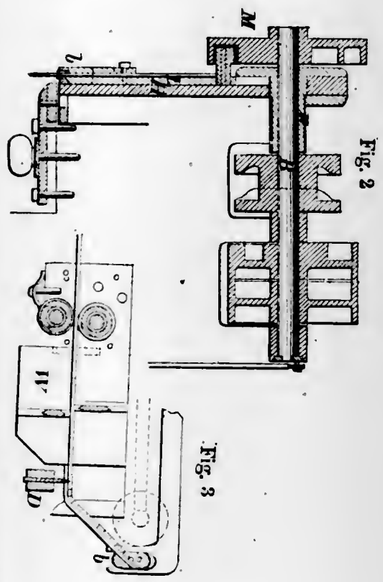
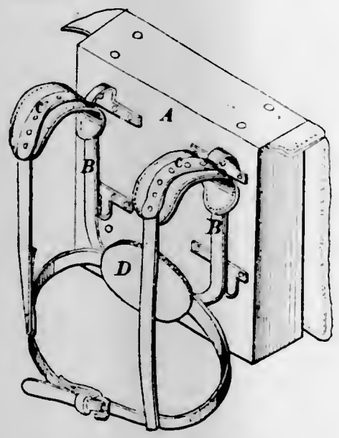


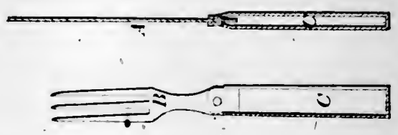
Fig. 2

Fig. 3

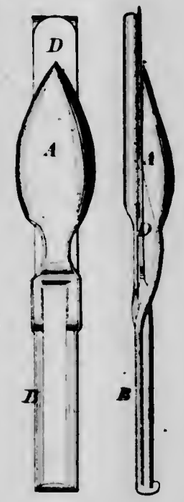
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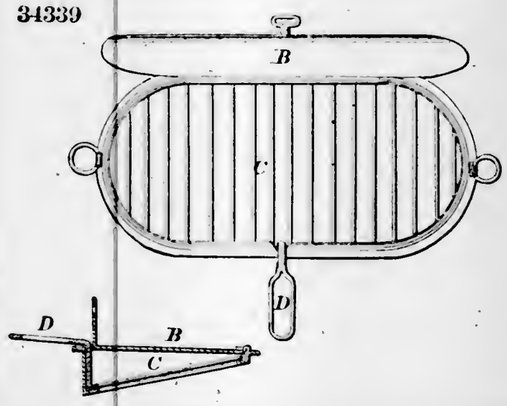
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Fig. 1

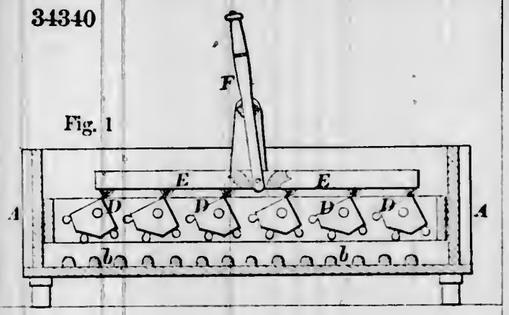
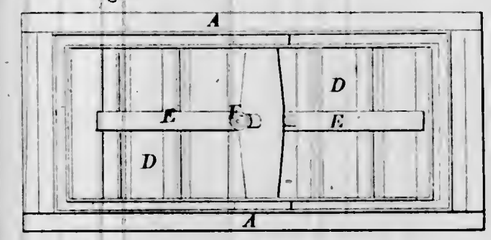
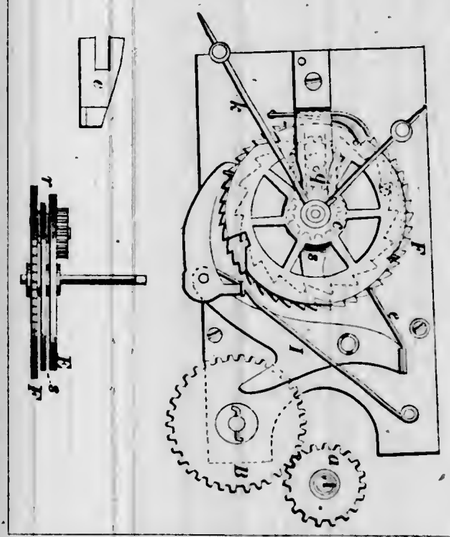


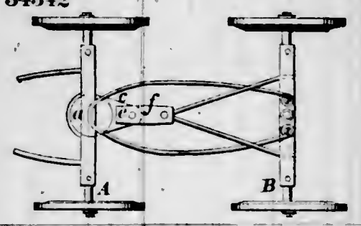
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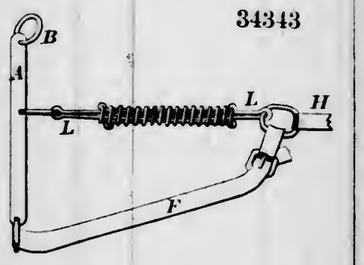
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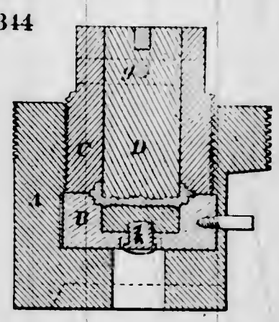
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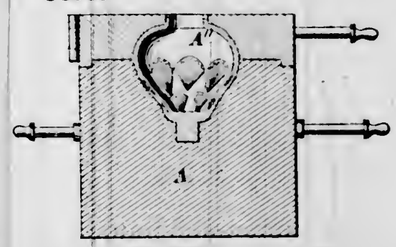
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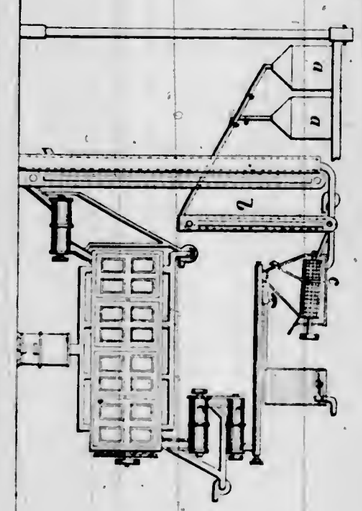
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Fig. 1

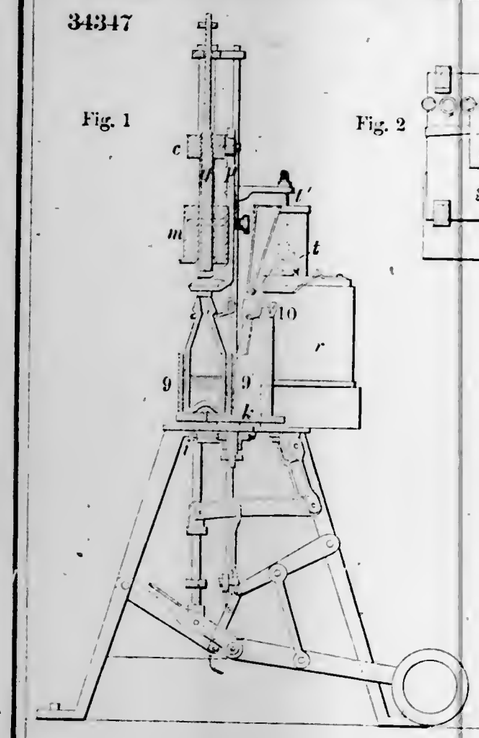
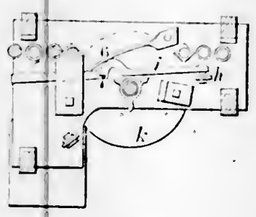


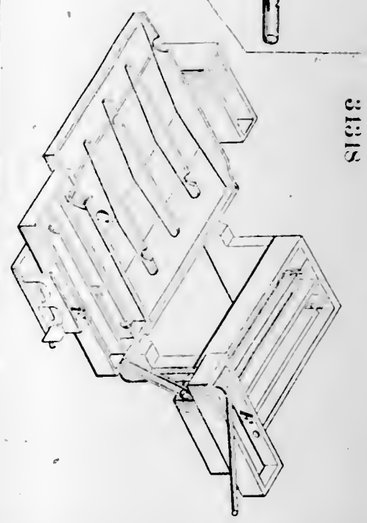
Fig. 2



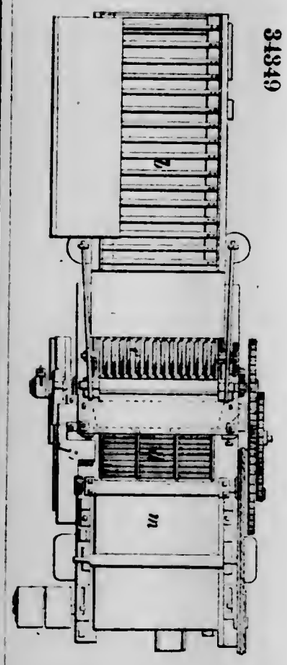
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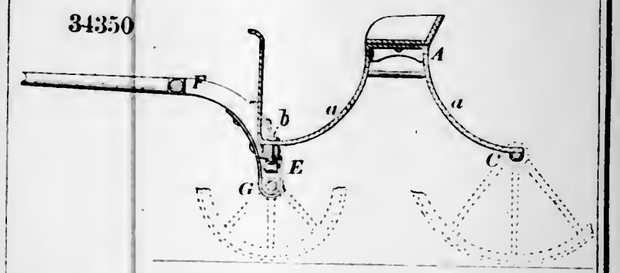
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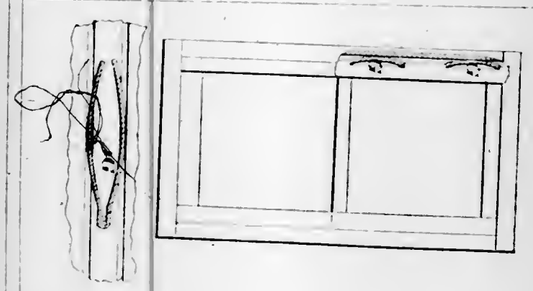
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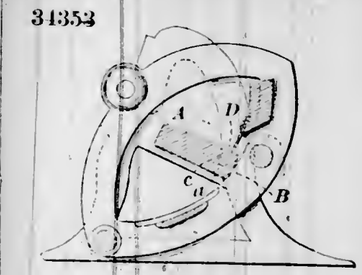
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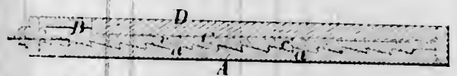


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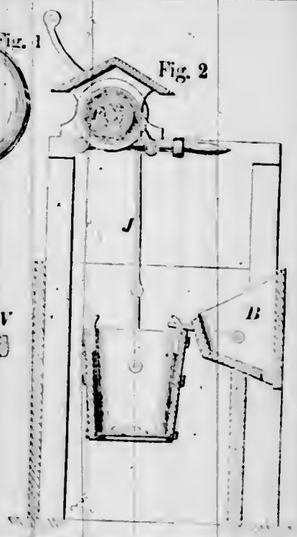


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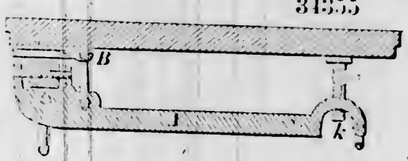
Fig. 1



Fig. 2



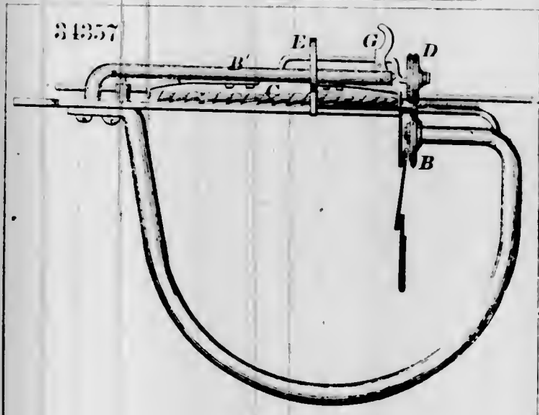
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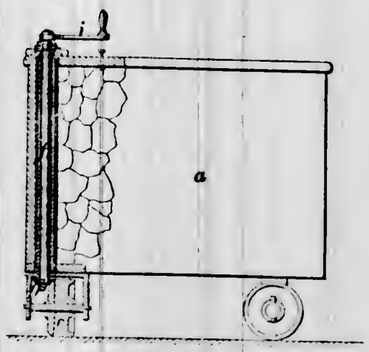
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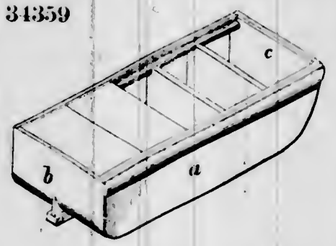
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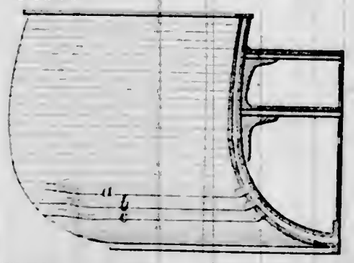
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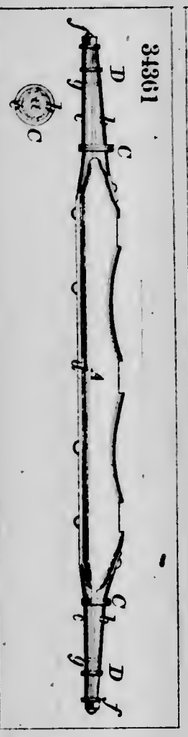
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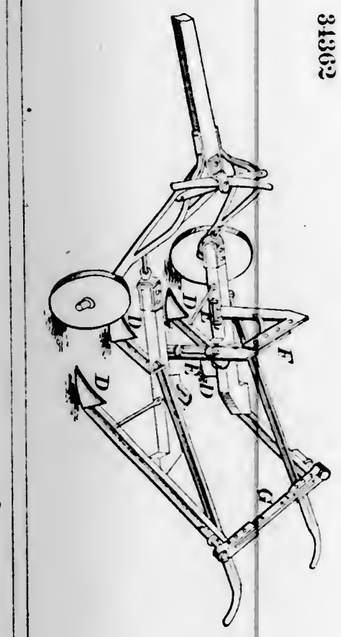
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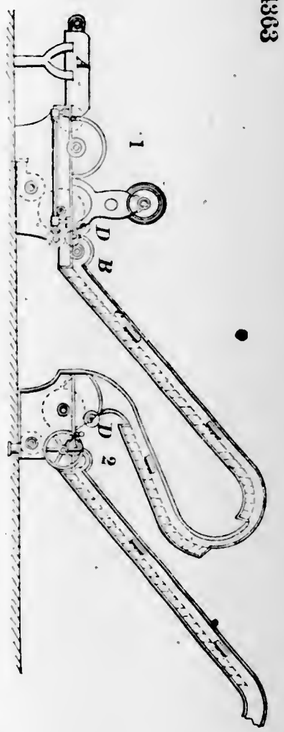
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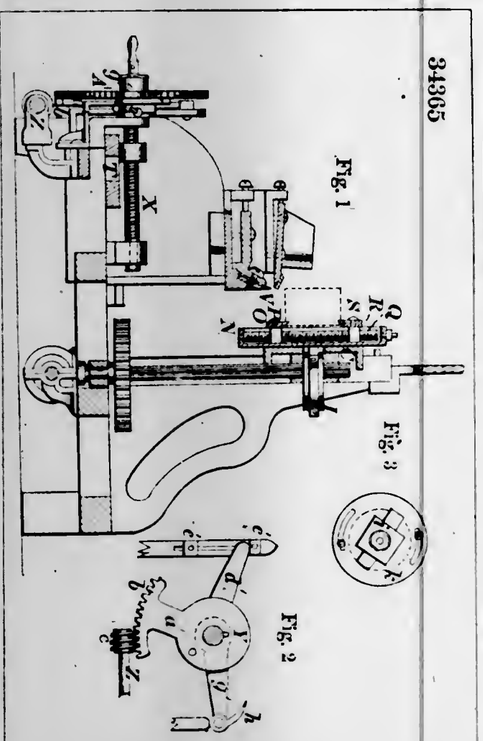
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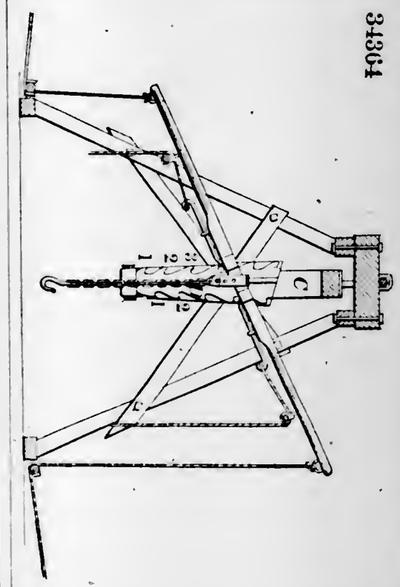
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Fig. 1

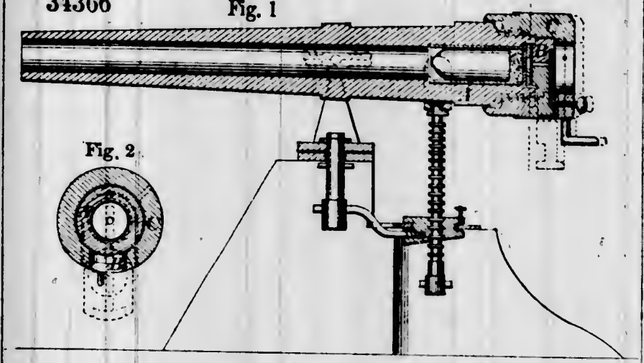


Fig. 2

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Fig. 1

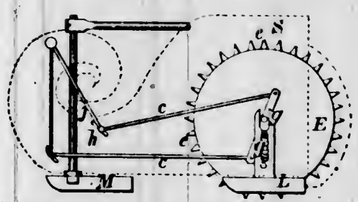
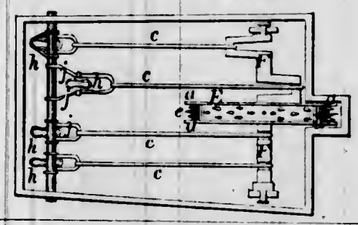


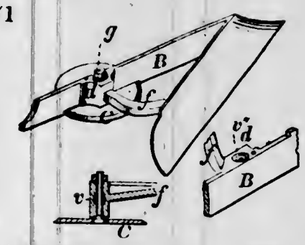
Fig. 2



34368



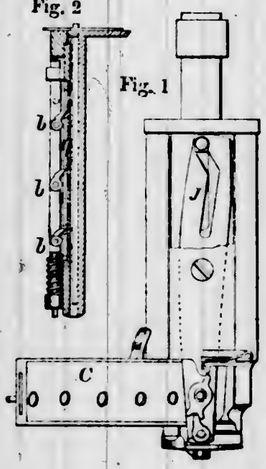
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Fig. 2

Fig. 1



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Fig. 1

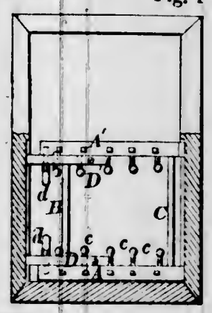
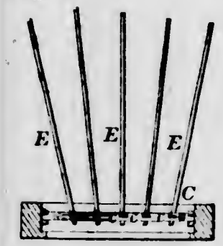
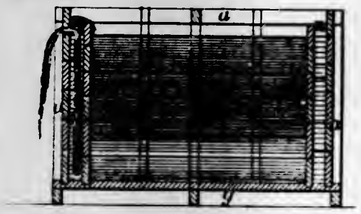


Fig. 2



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Fig. 1

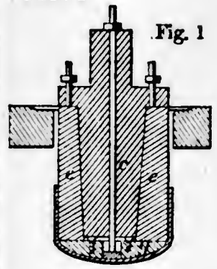
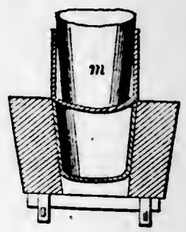


Fig. 2

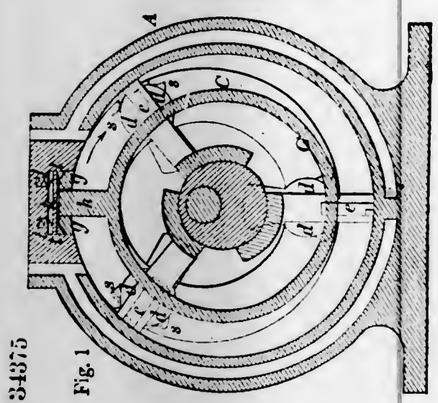


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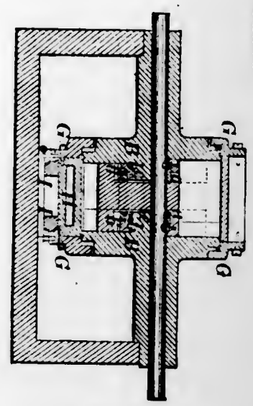
Fig. 2



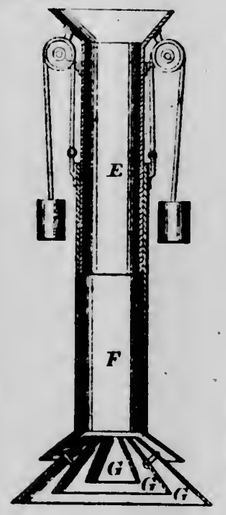
Fig. 1



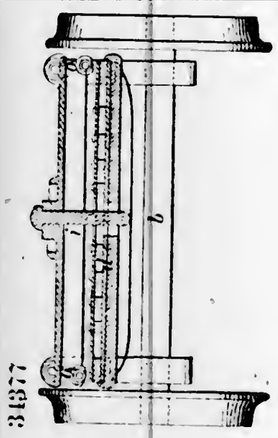
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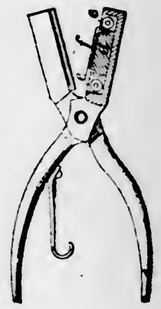
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Fig. 1

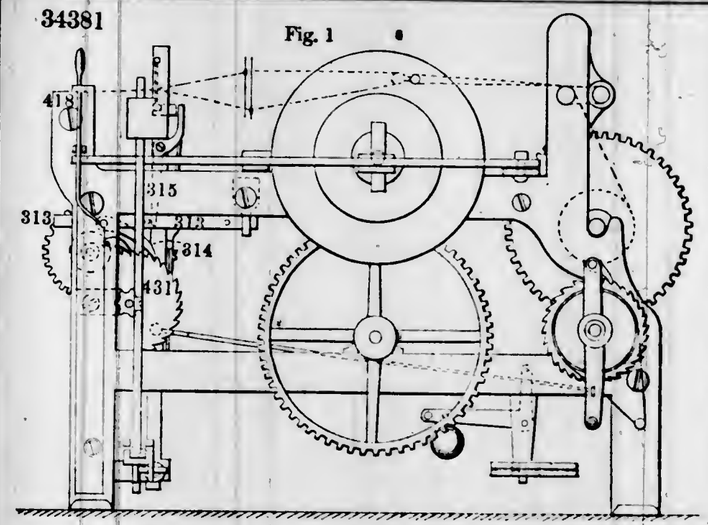
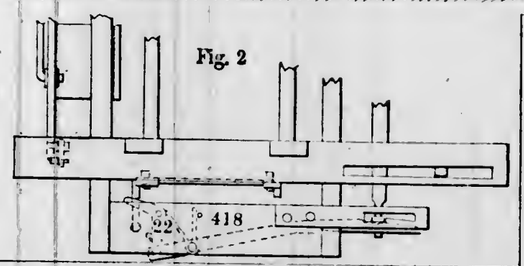
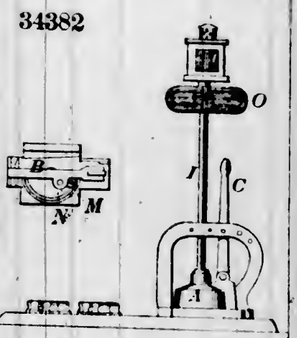


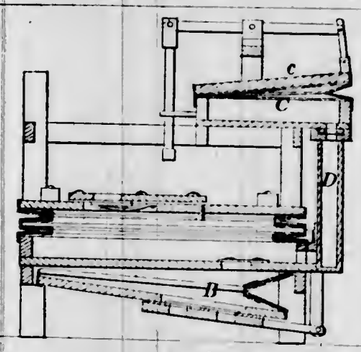
Fig. 2



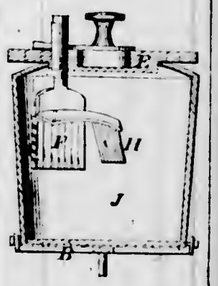
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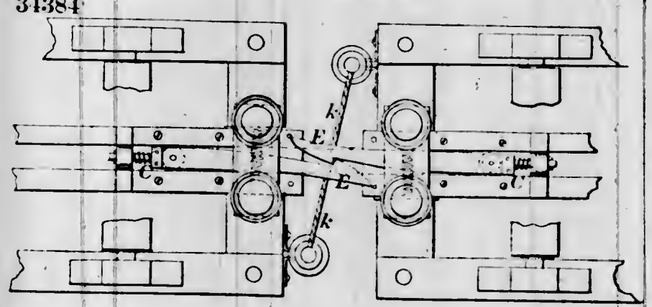
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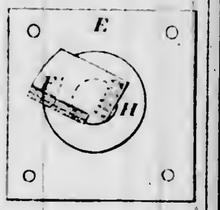


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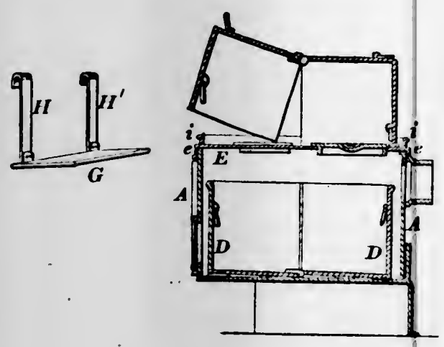


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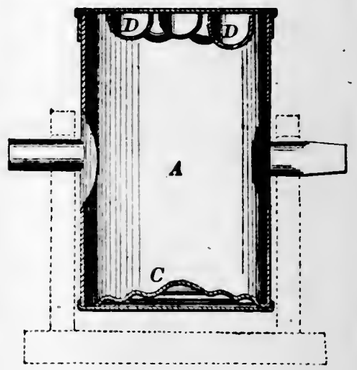




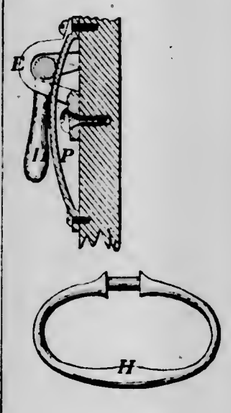
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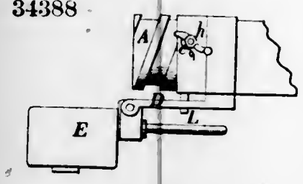
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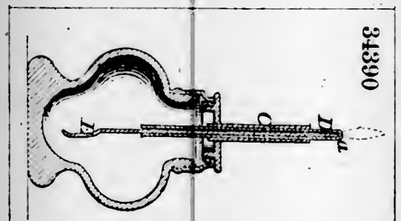
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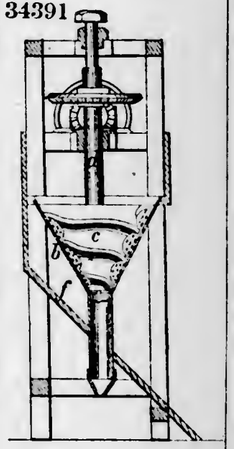
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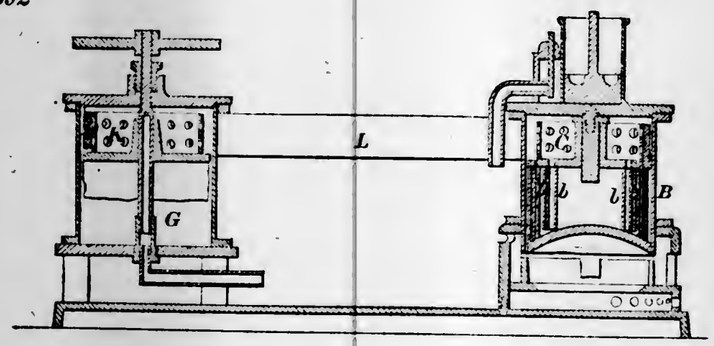
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Fig. 1

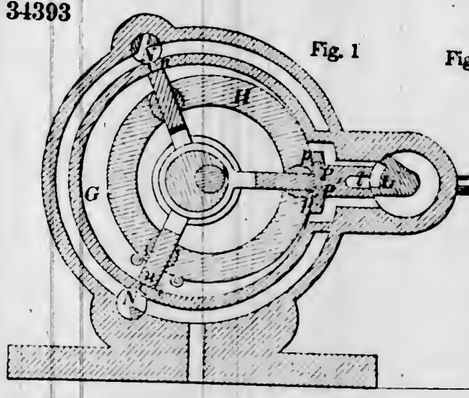
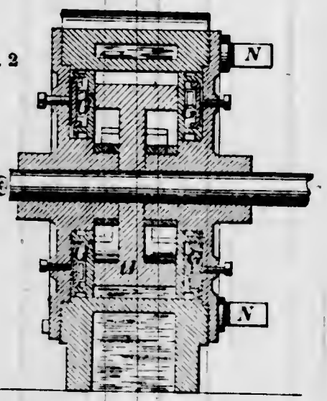
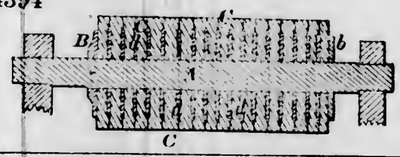


Fig. 2



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Fig. 1

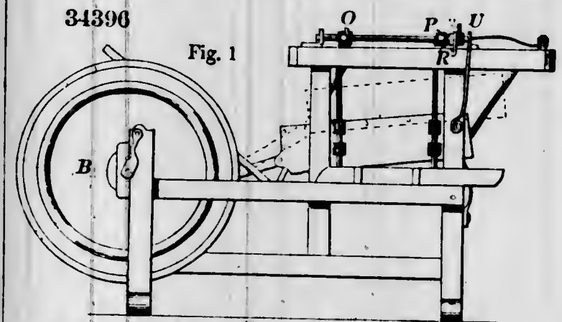
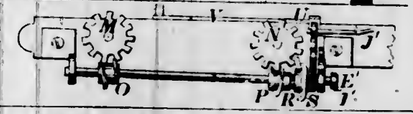
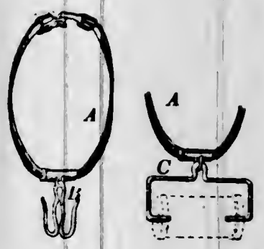


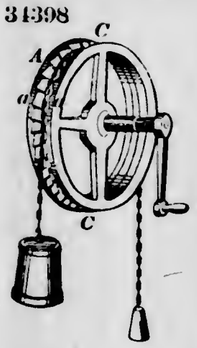
Fig. 2



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Fig. 1

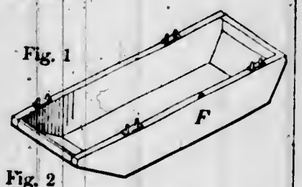


Fig. 2



34400

Fig. 1

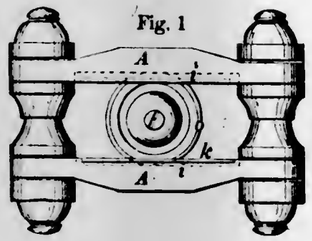
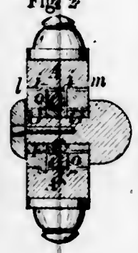
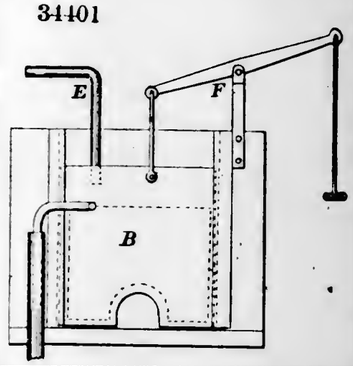


Fig. 2



34401



34402 h h Fig. 1

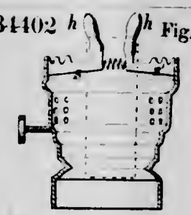
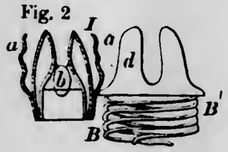
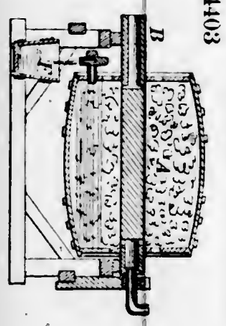


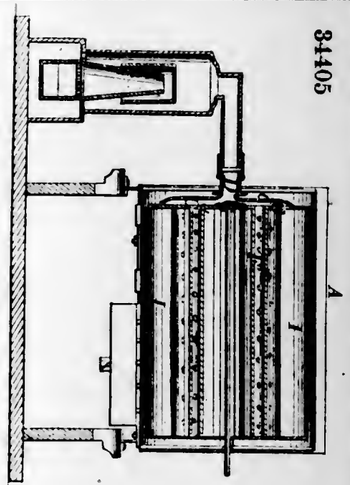
Fig. 2



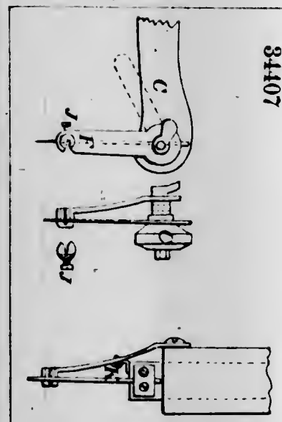
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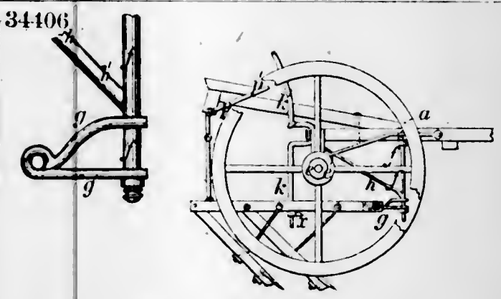
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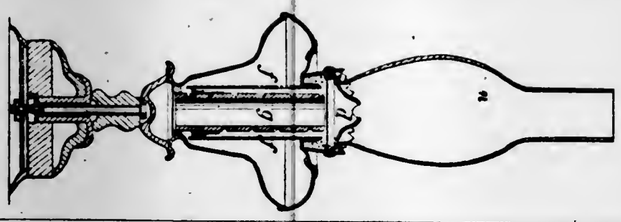
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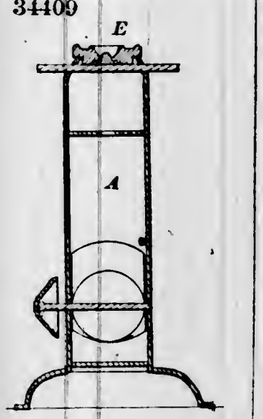
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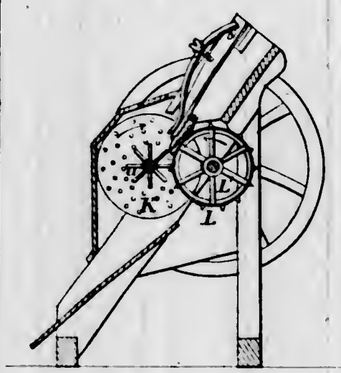
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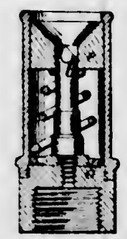
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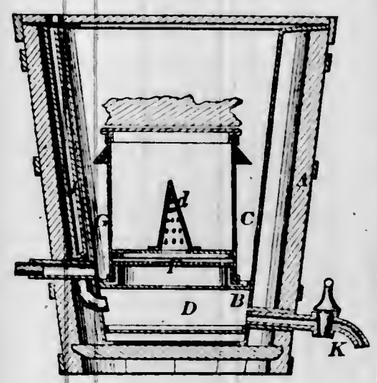
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Fig. 1

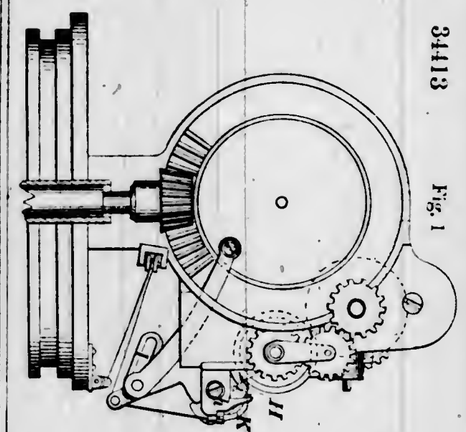
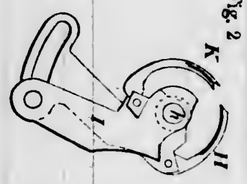
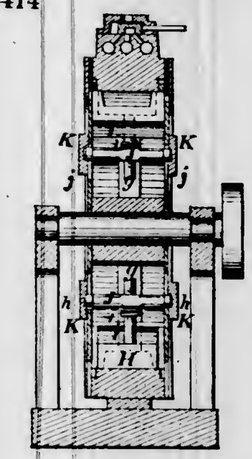


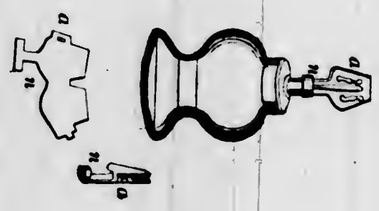
Fig. 2



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Fig. 1

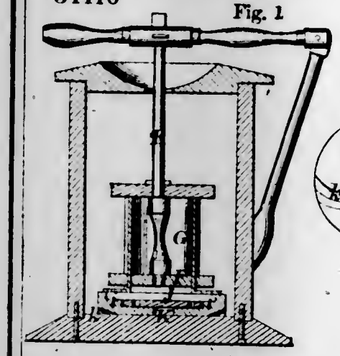


Fig. 2



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Fig. 2

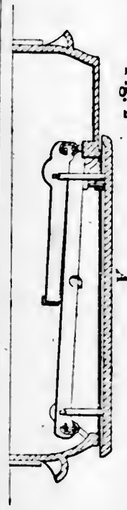
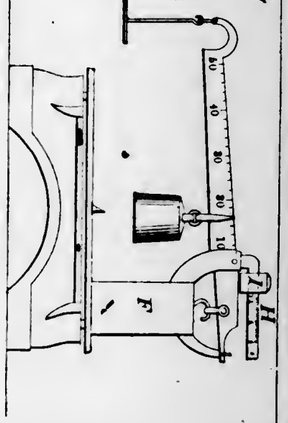
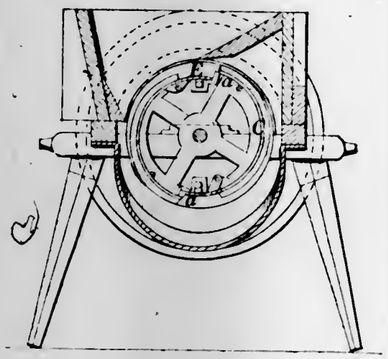


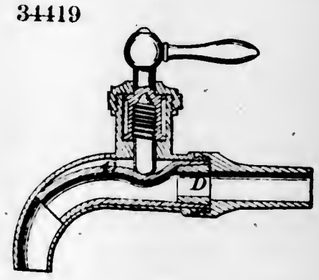
Fig. 1



34418



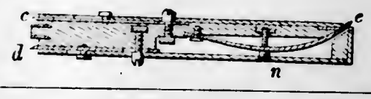
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Fig. 1

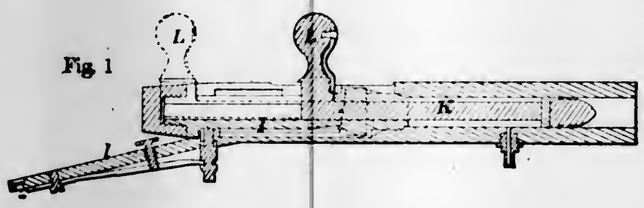
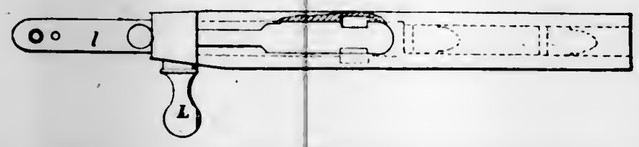
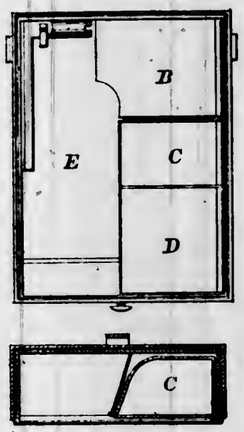


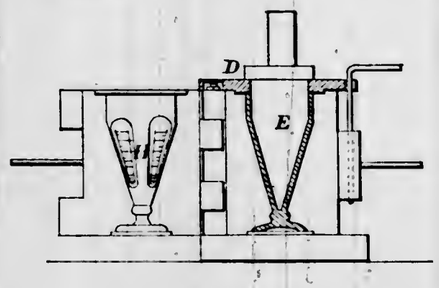
Fig. 2



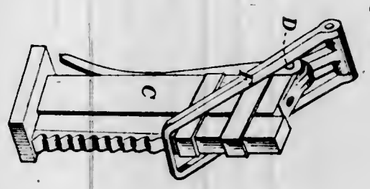
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Fig. 1

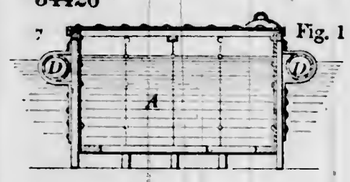
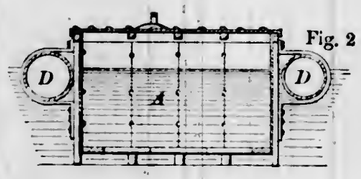
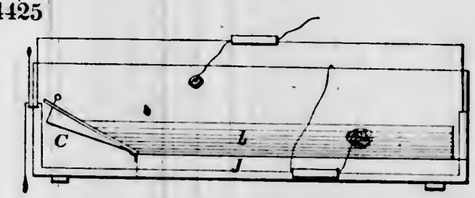


Fig. 2



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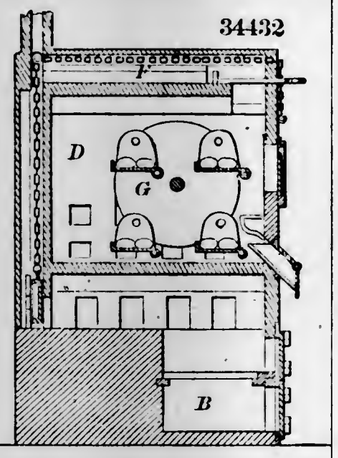
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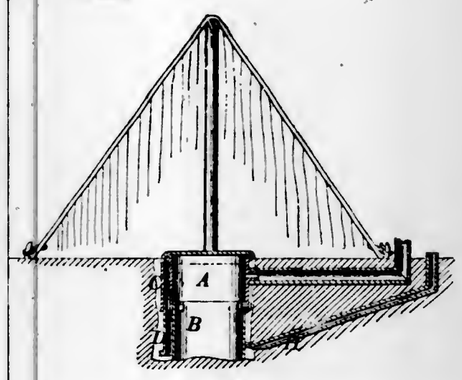
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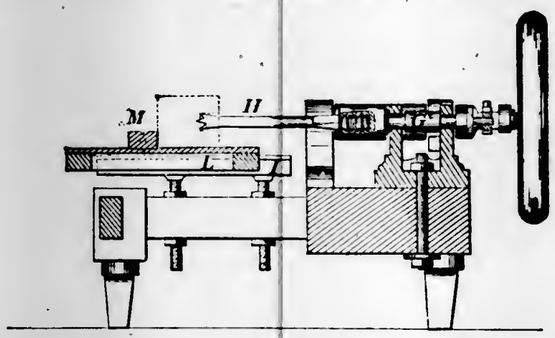
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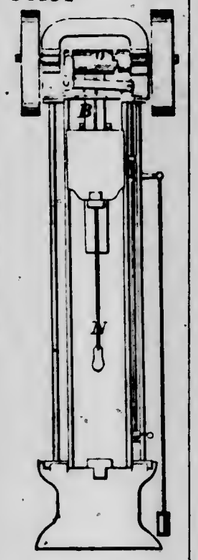
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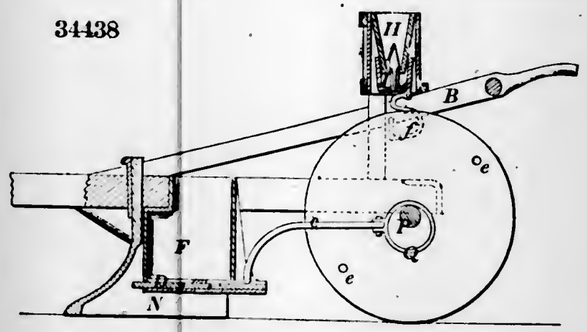
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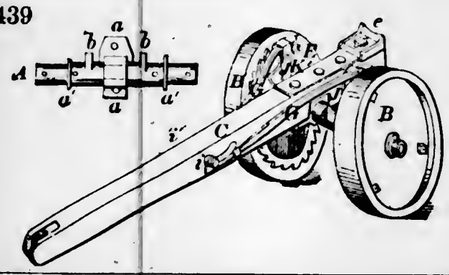
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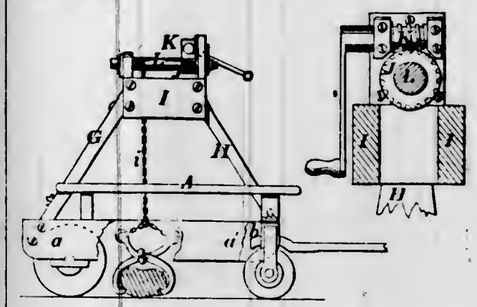
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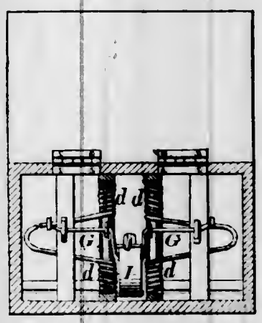
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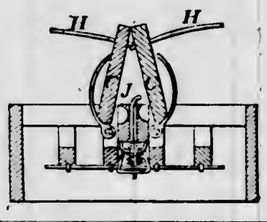


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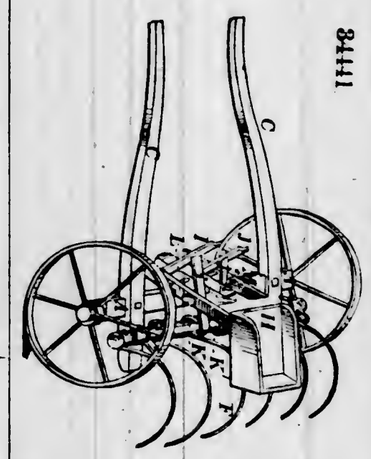


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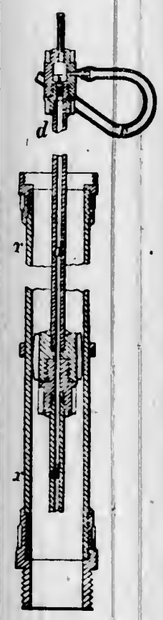
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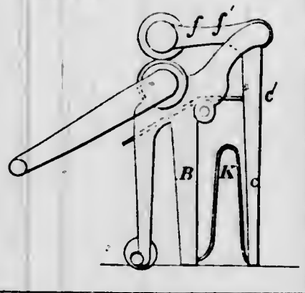
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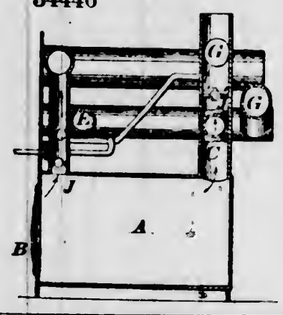
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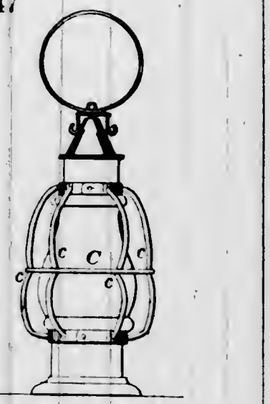
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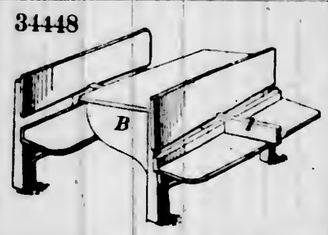
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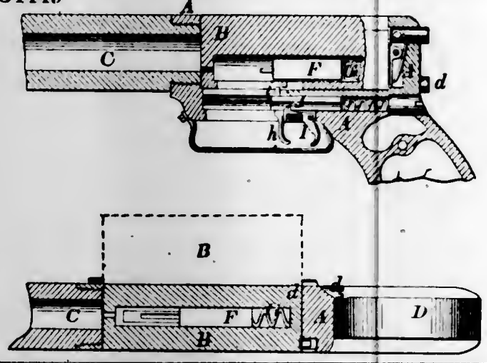
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Fig. 1

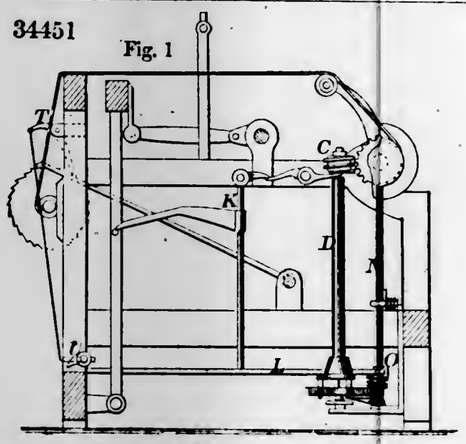
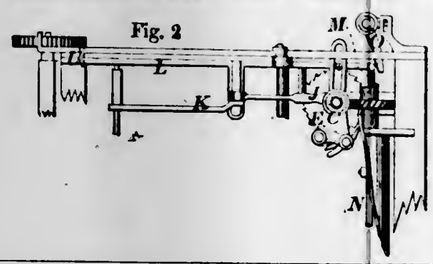
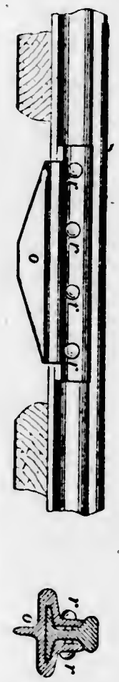


Fig. 2



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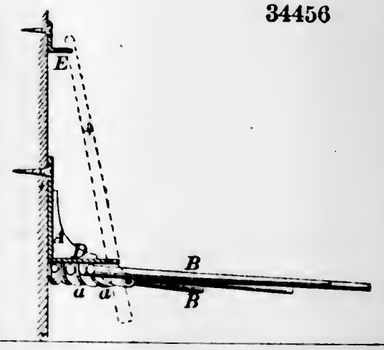
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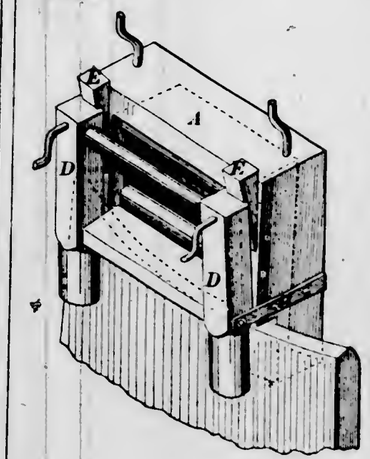
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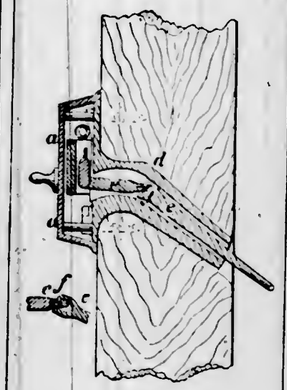
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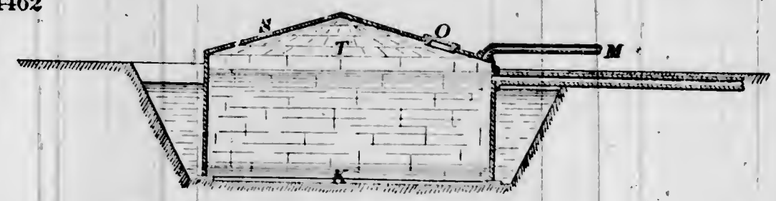
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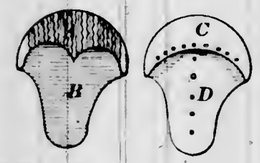
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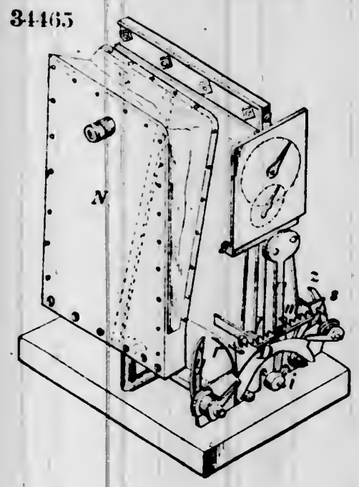
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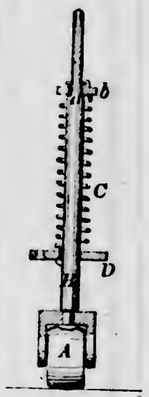
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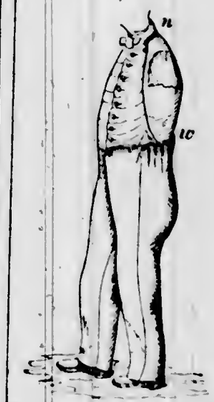
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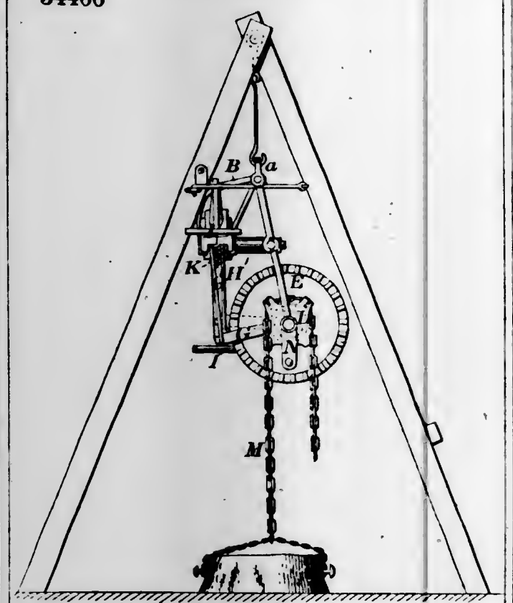
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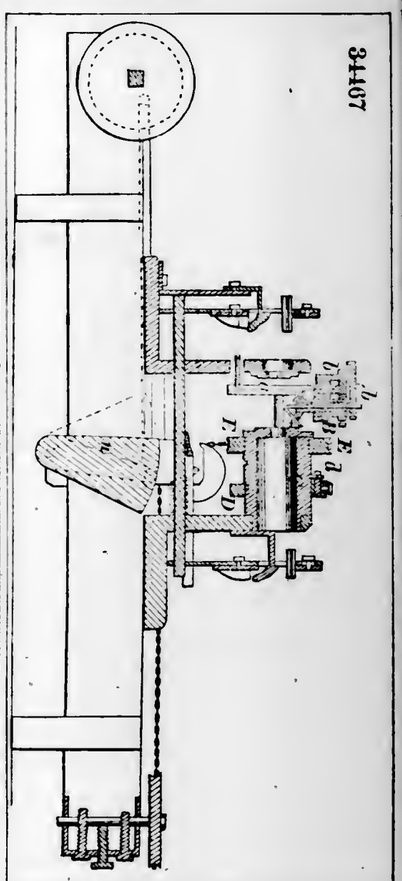
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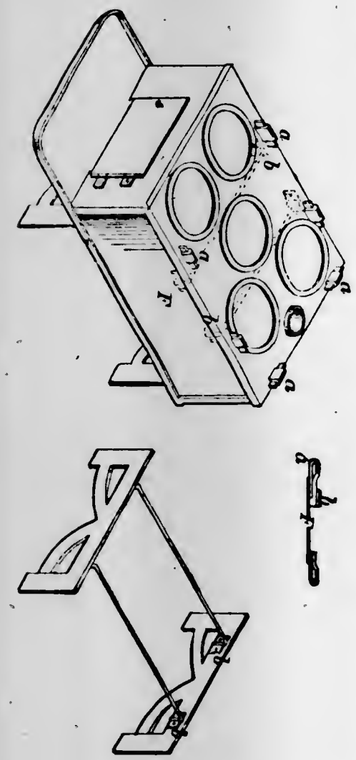
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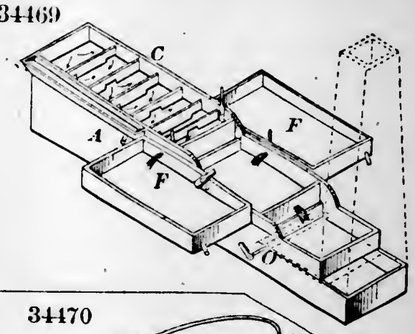
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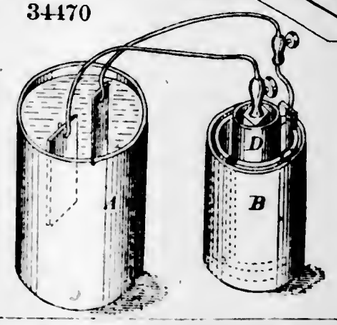
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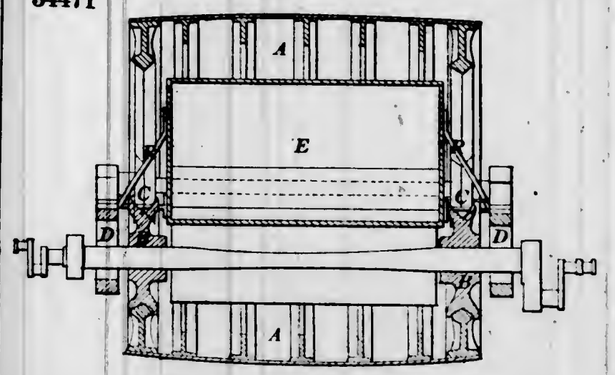
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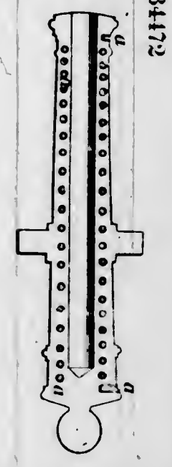
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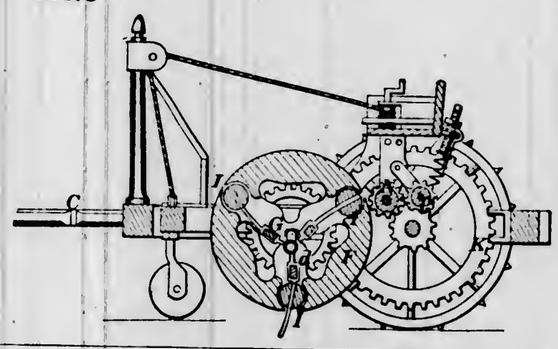
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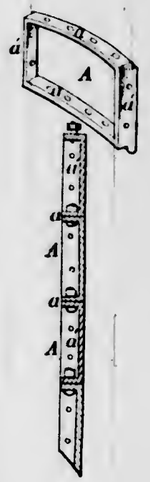
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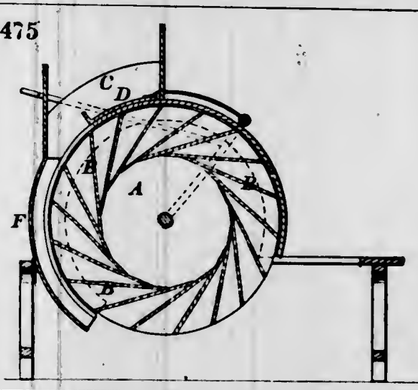
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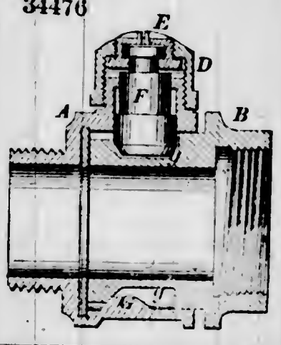
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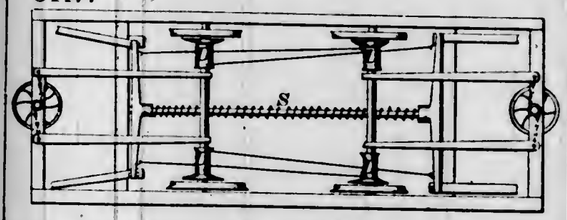
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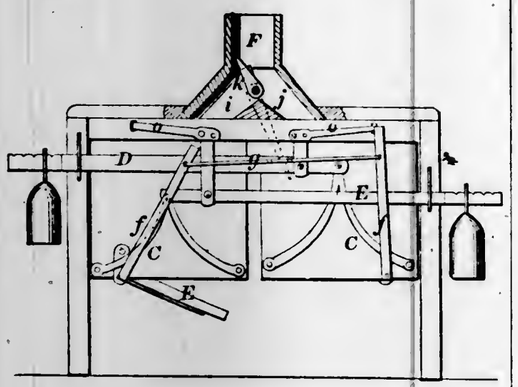
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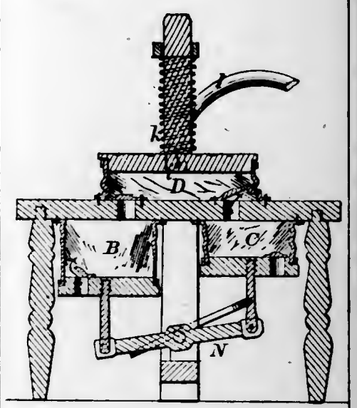
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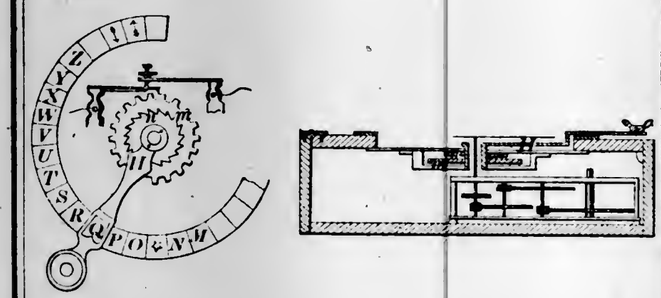
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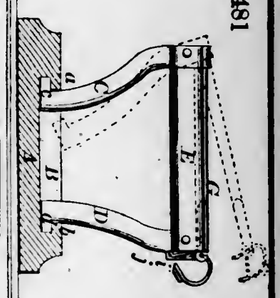
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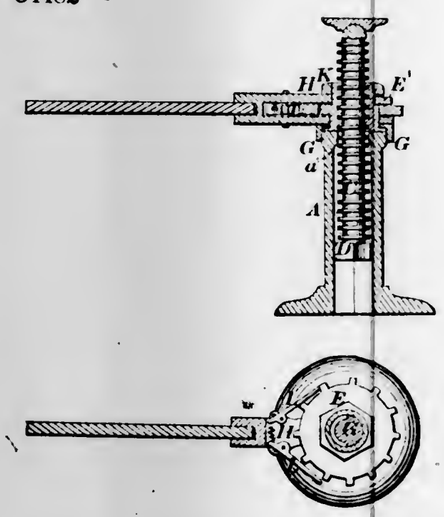
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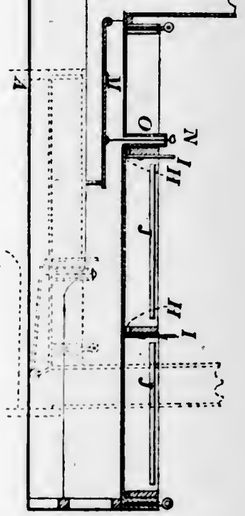
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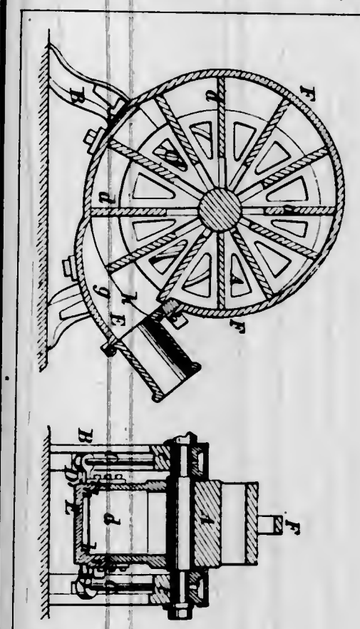
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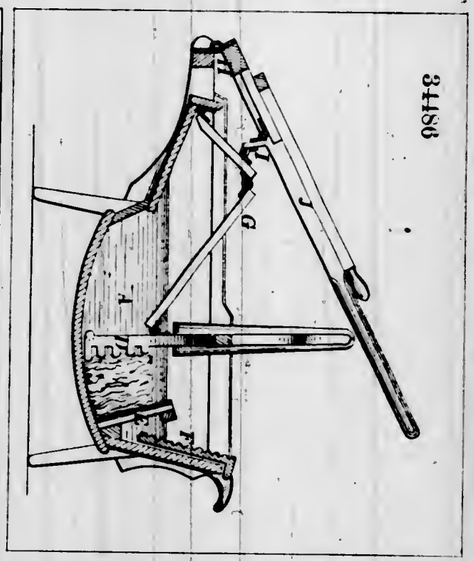
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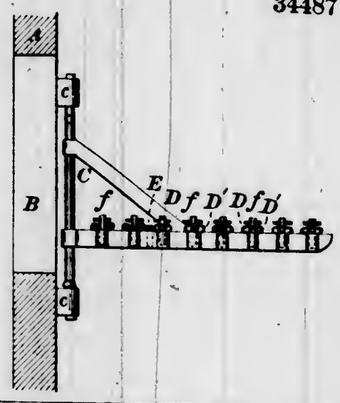
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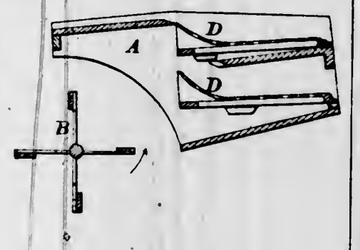
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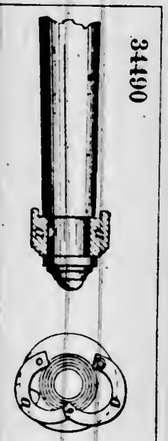
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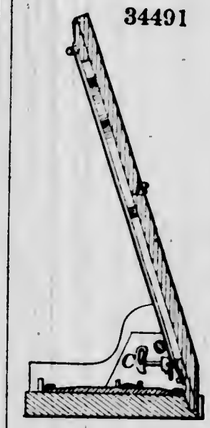
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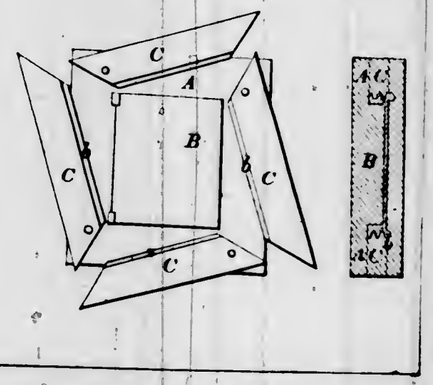
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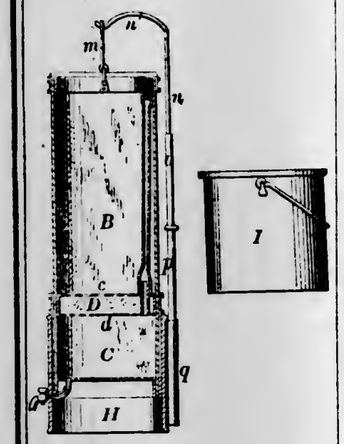
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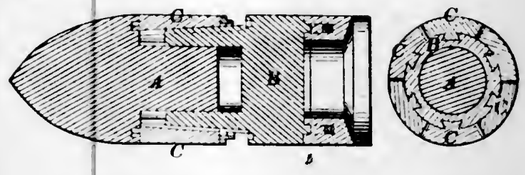
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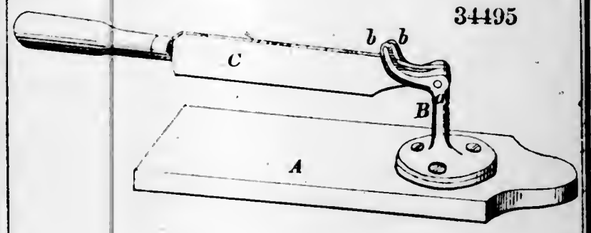
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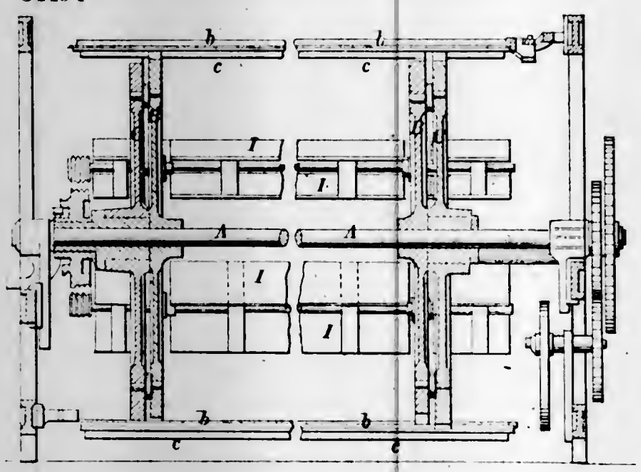
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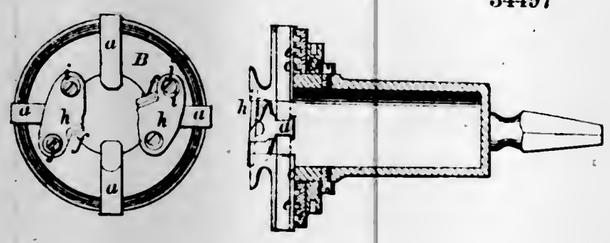
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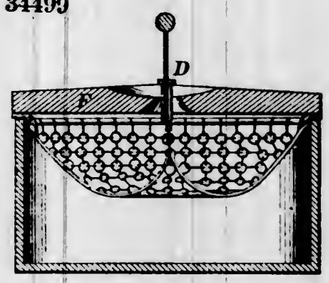
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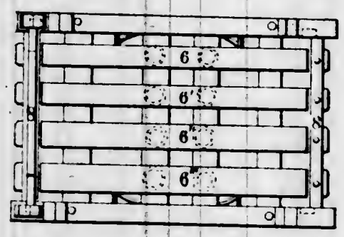
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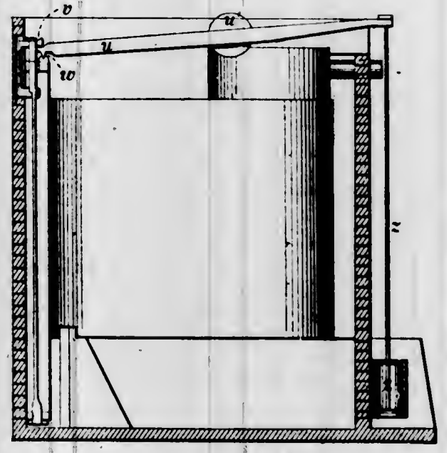
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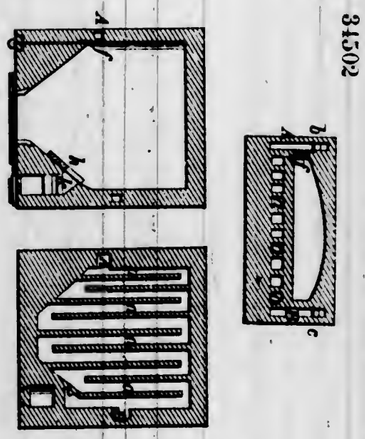
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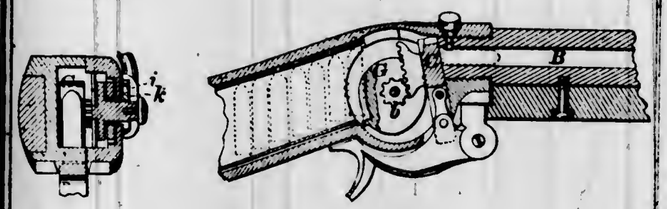
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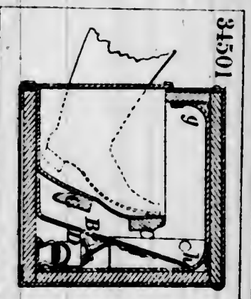
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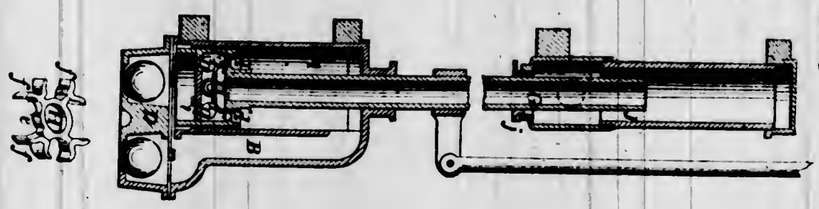
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Fig. 1

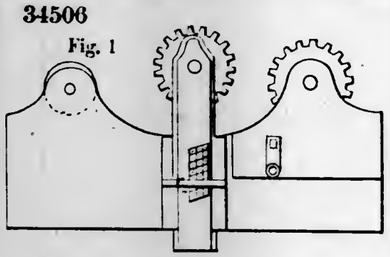
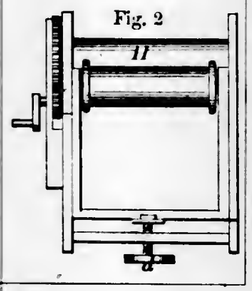
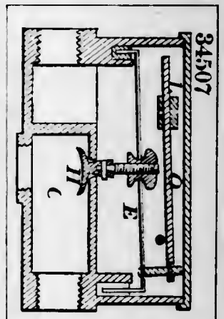


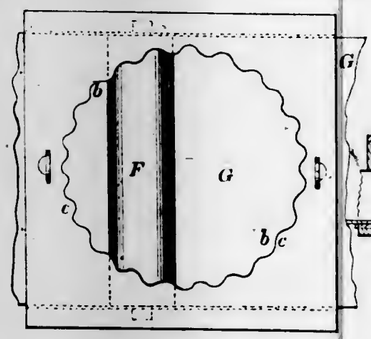
Fig. 2

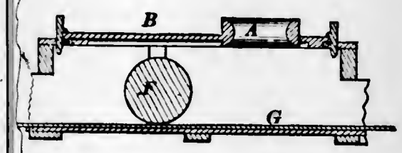


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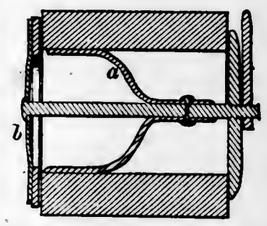


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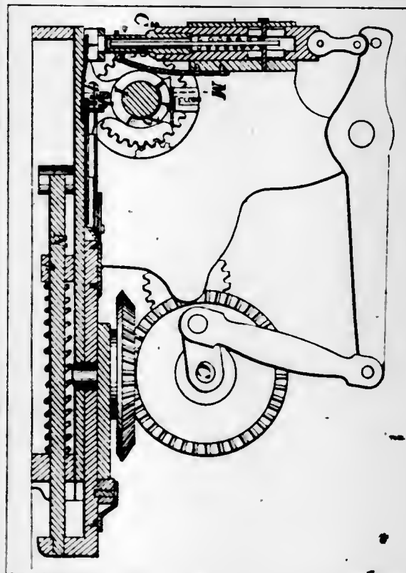


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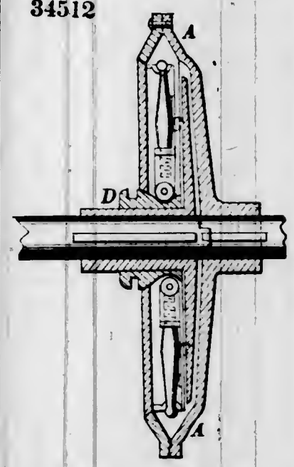


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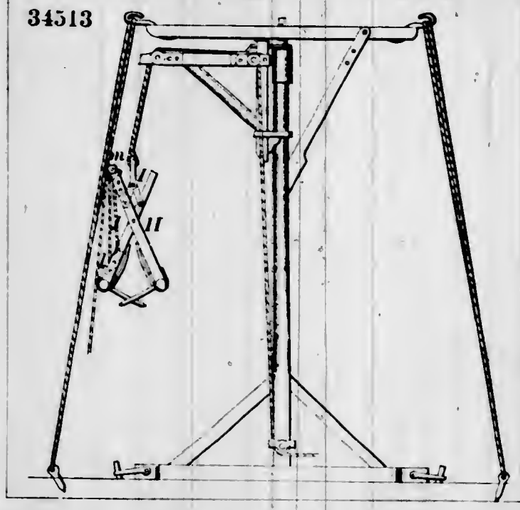
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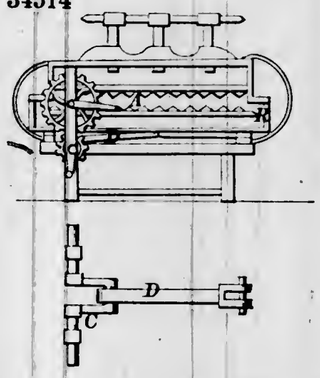
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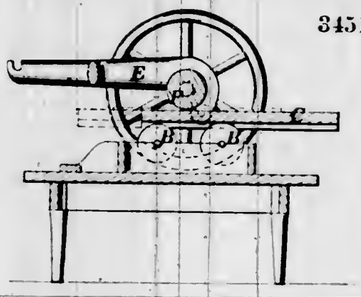
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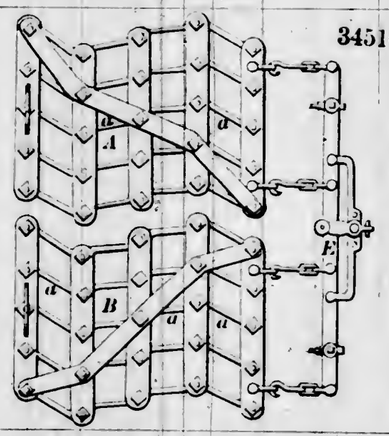
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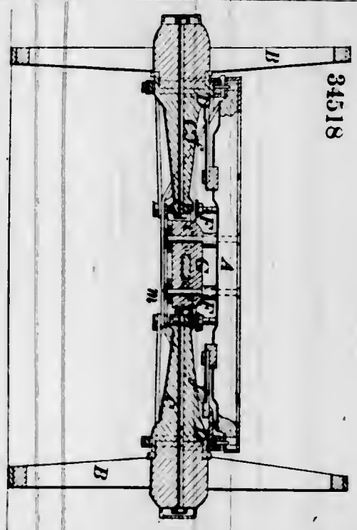
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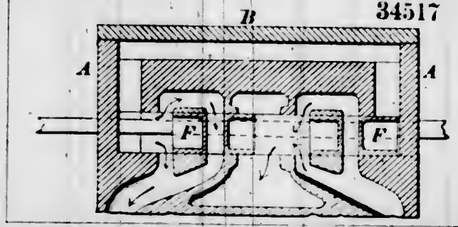
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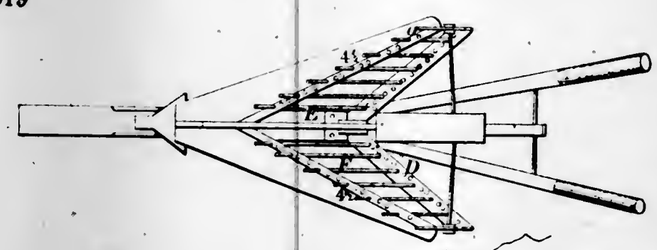
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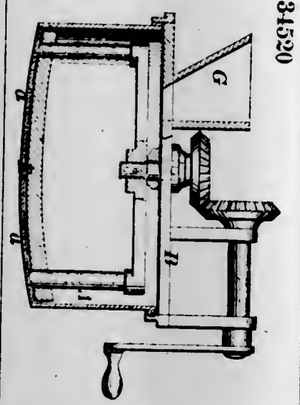
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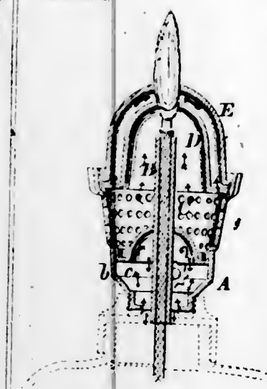
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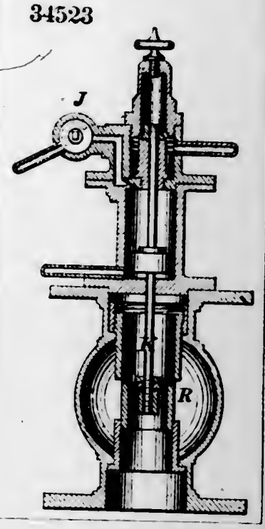
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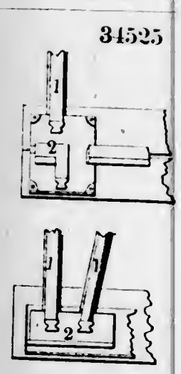
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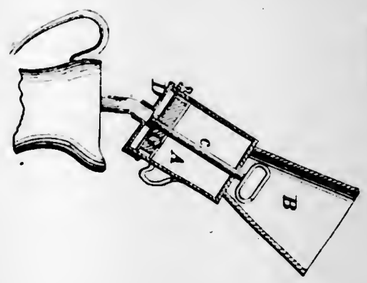
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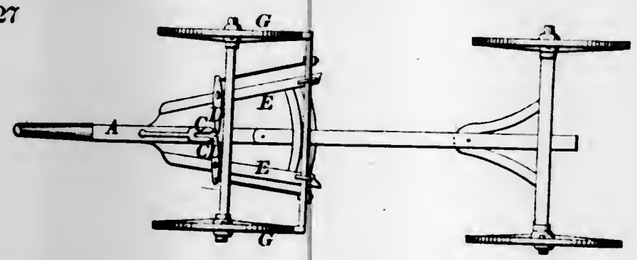
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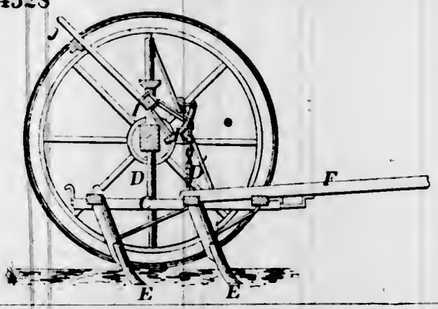
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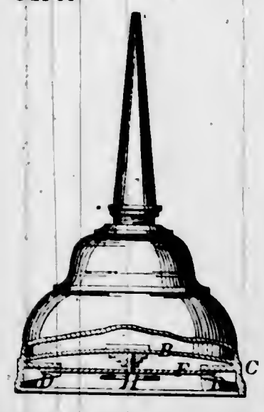
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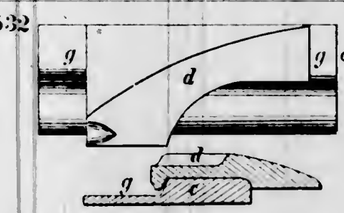
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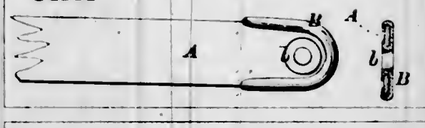
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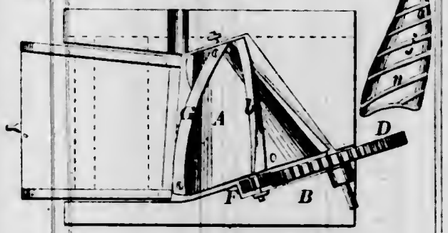
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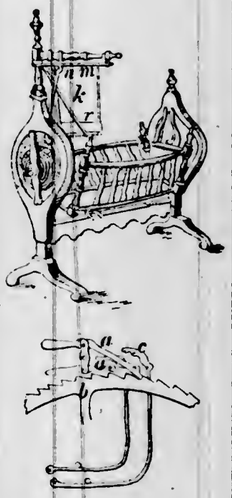
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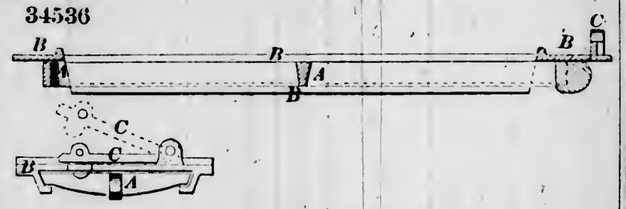
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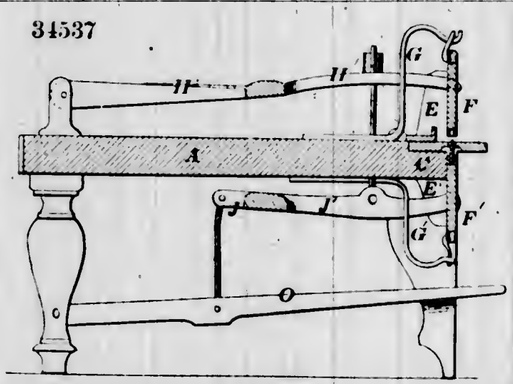
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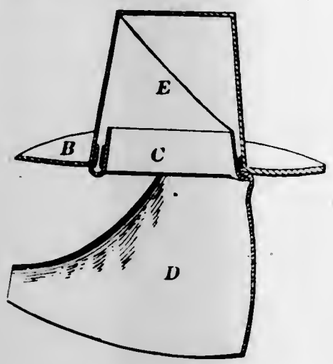


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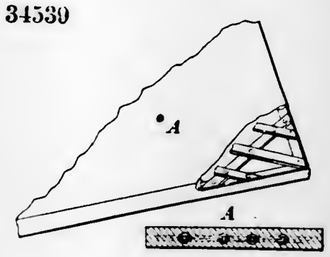


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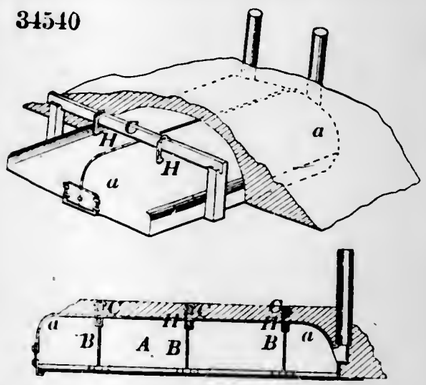
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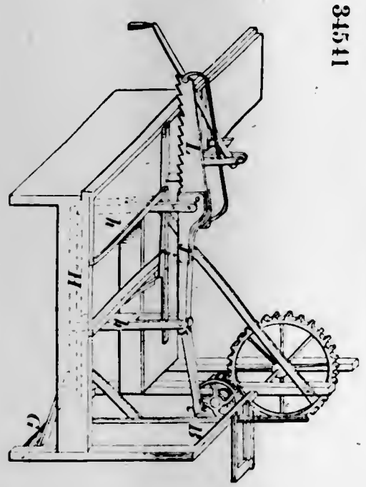
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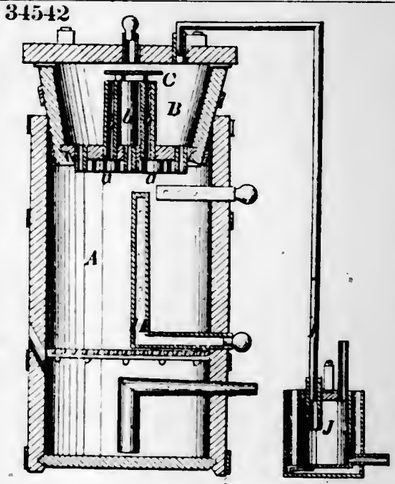
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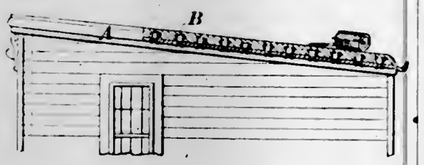
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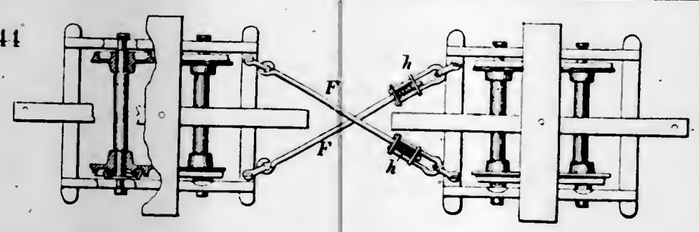
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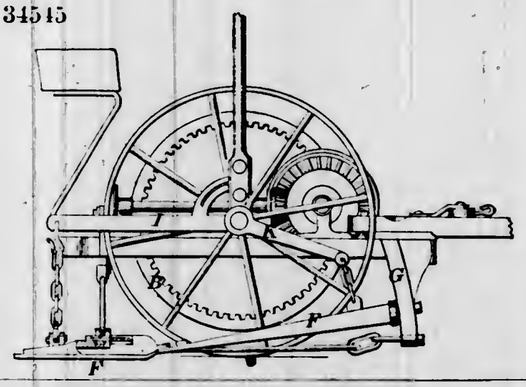
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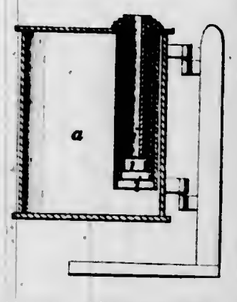
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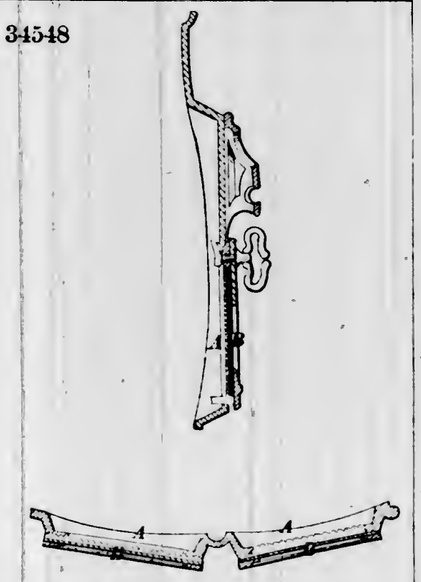
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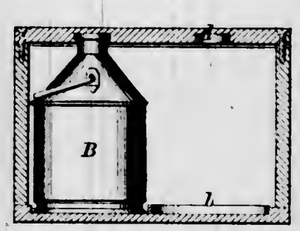
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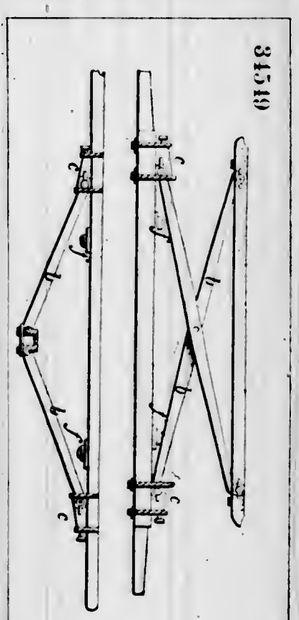
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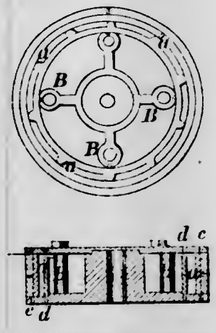
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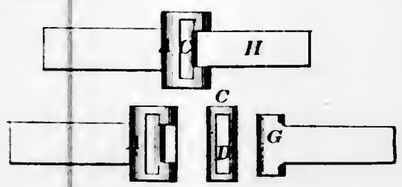
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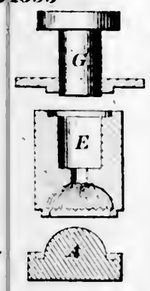
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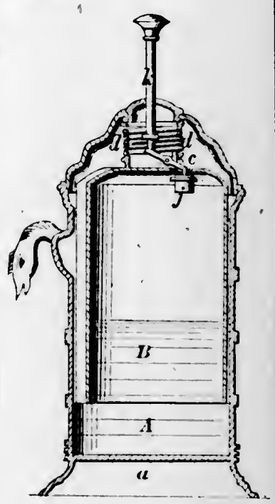
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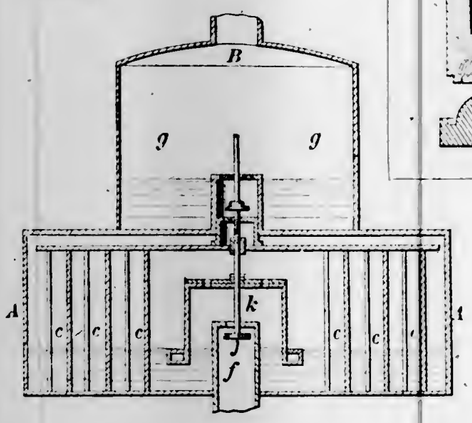
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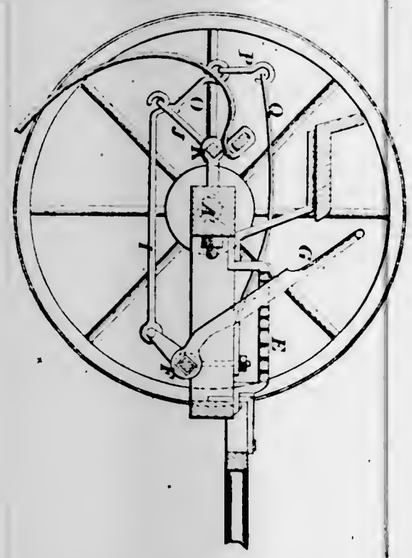
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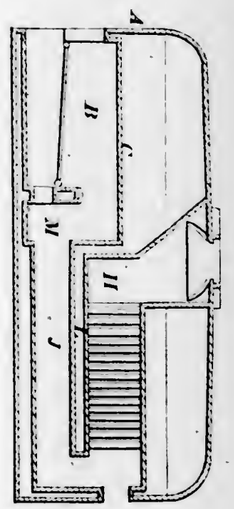
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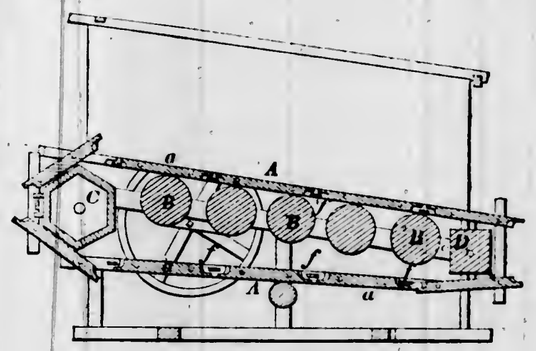
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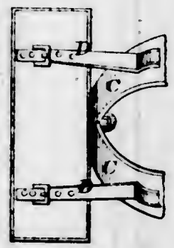
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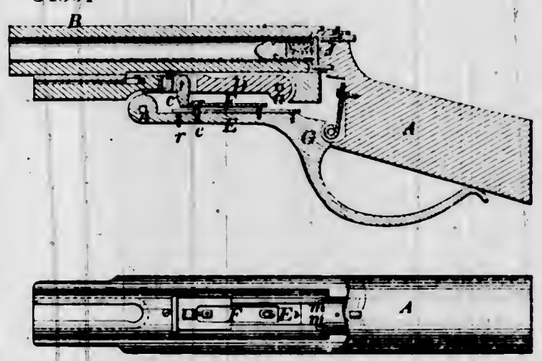
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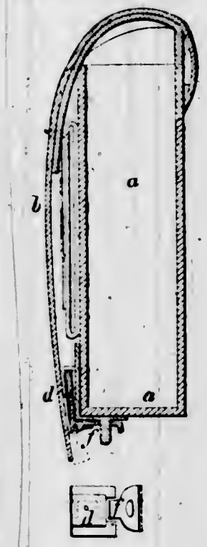
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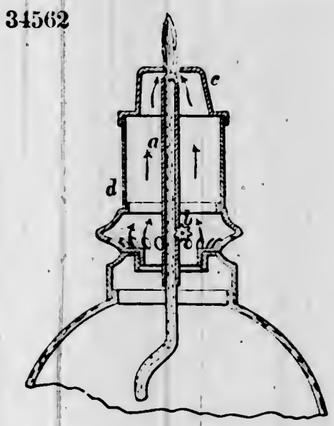
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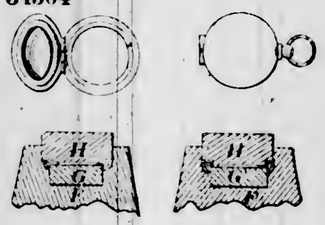
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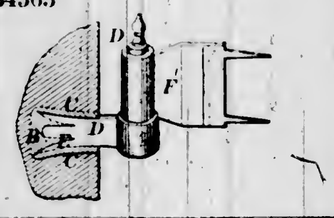
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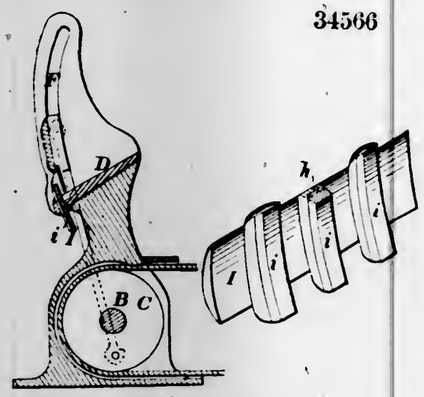
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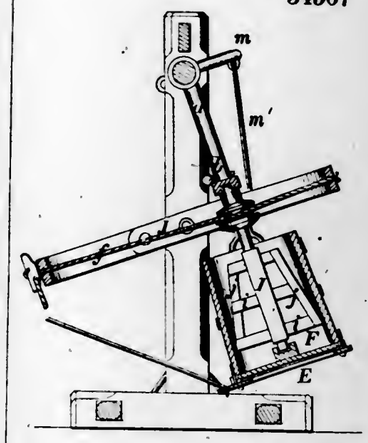
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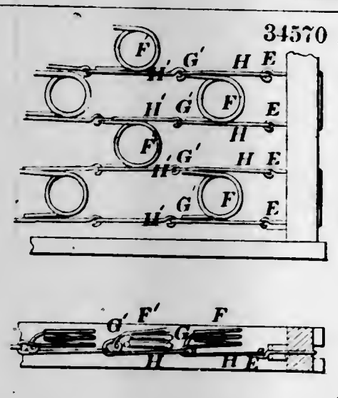
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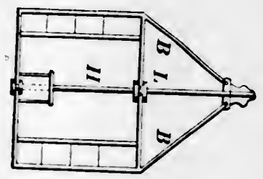
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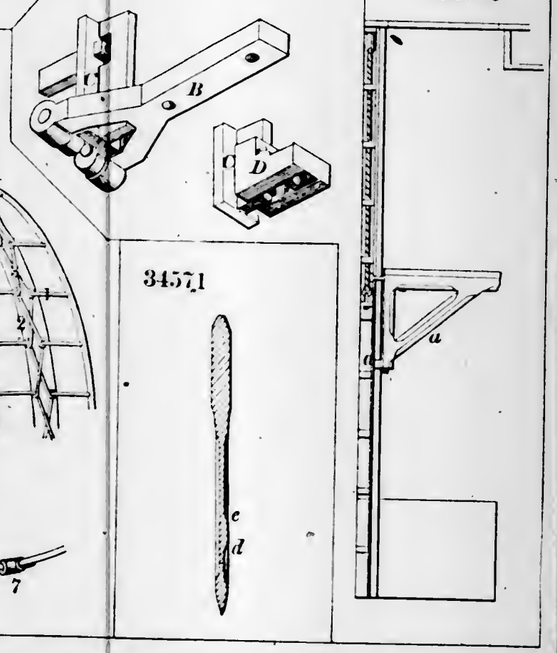
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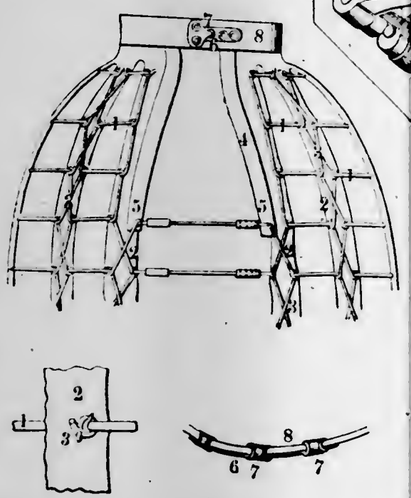
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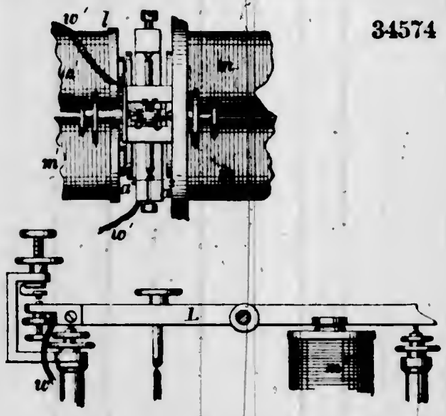


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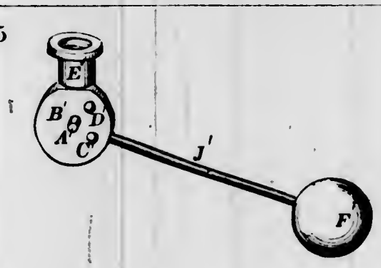
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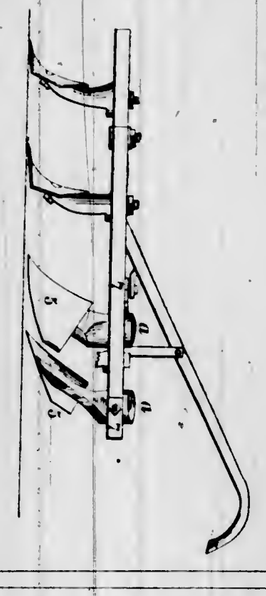
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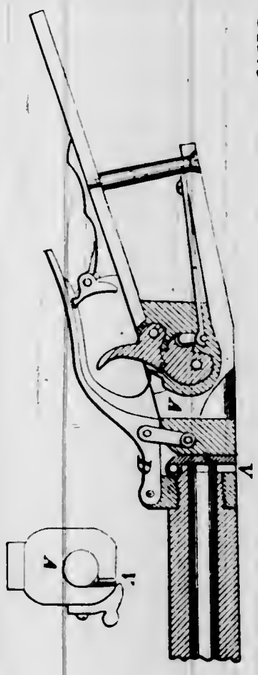
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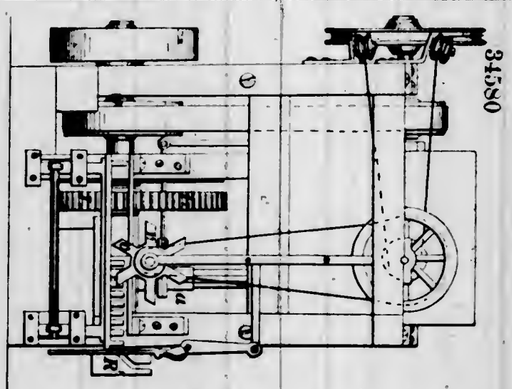
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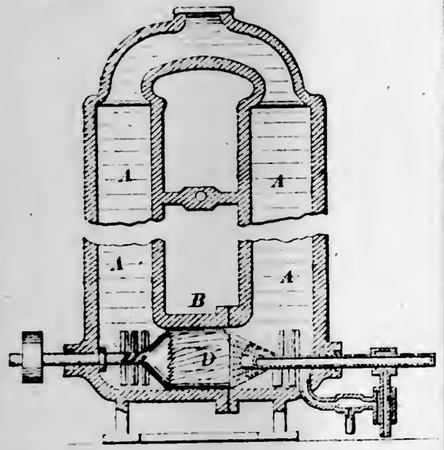
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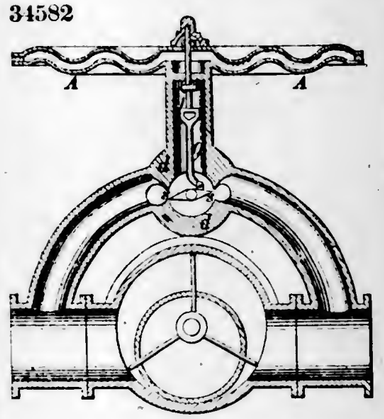
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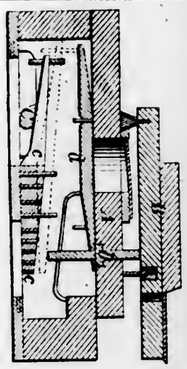
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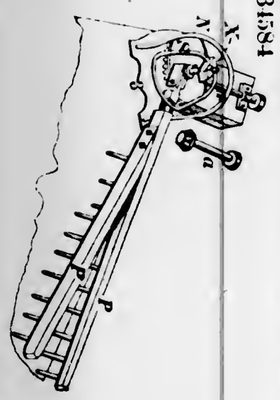
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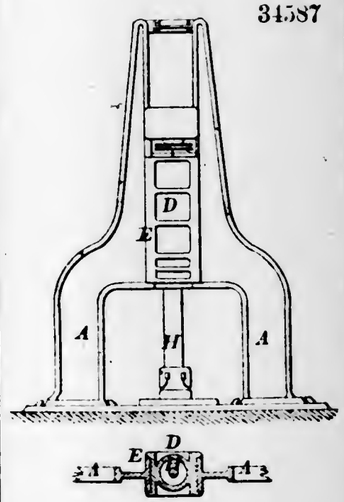
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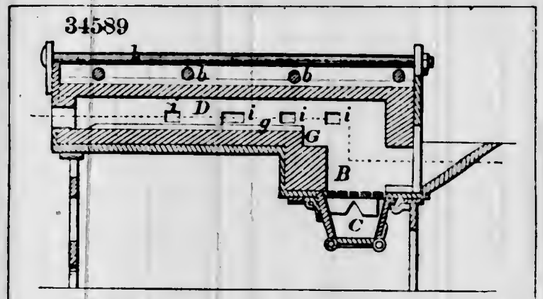
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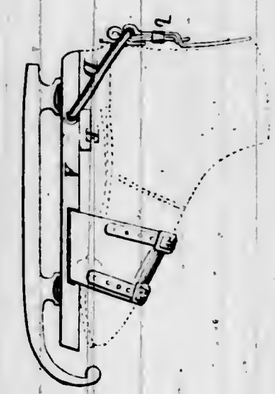
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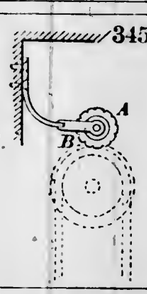
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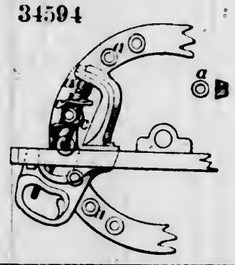
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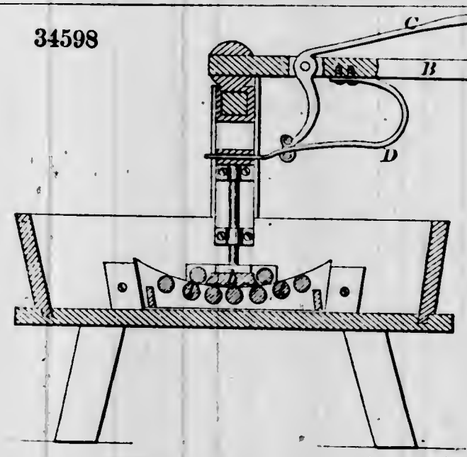
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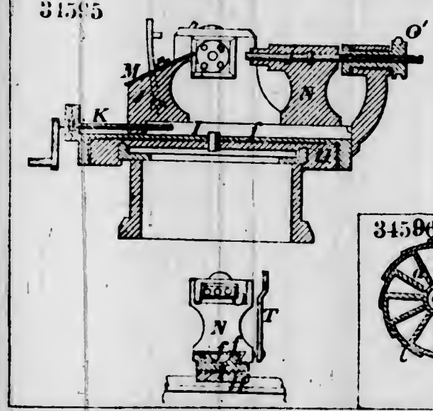
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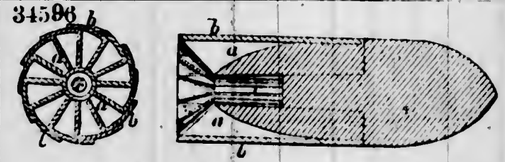
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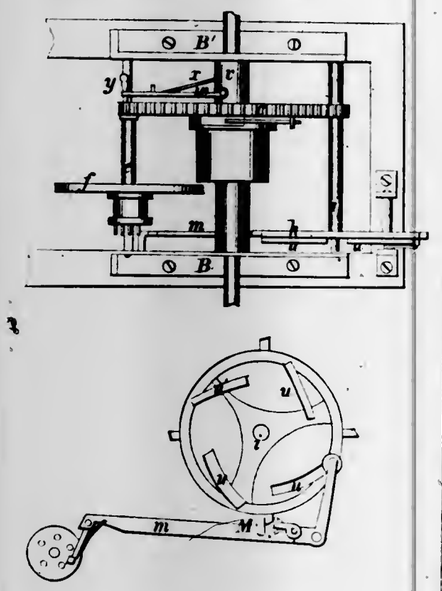
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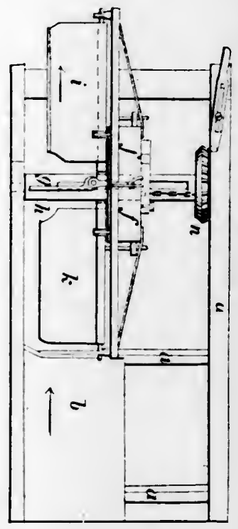
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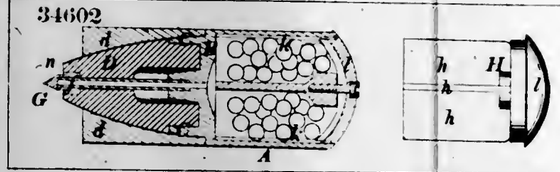
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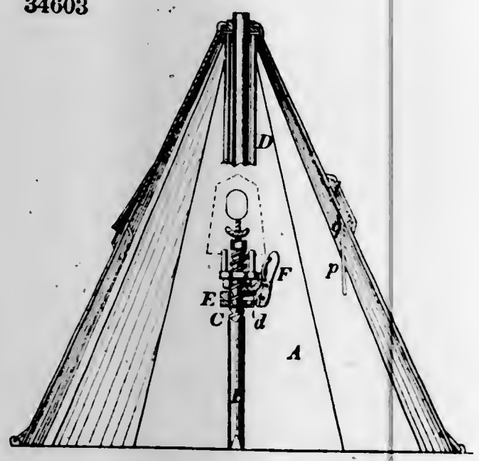
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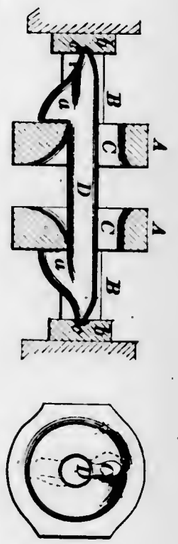
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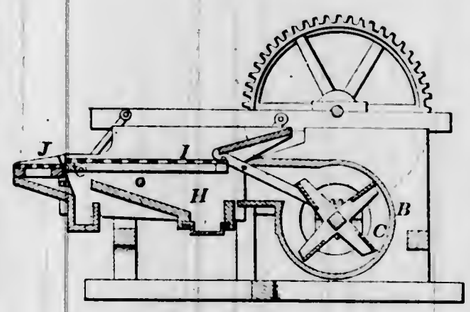
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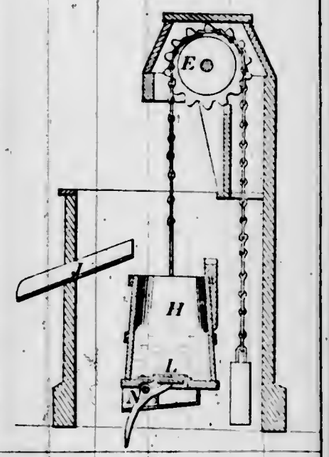
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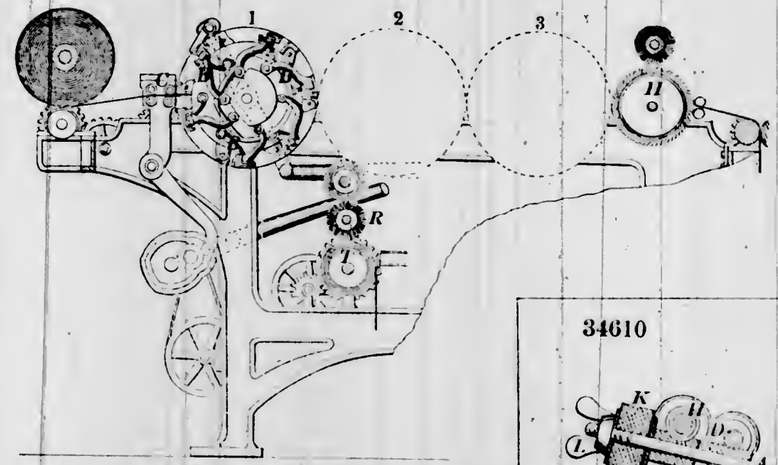
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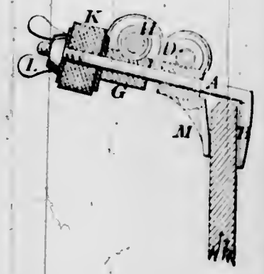
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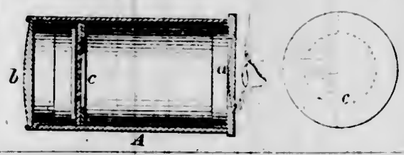
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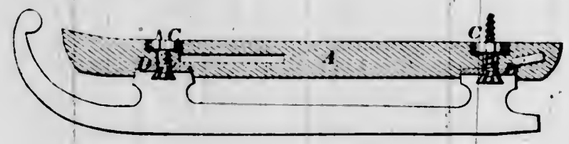
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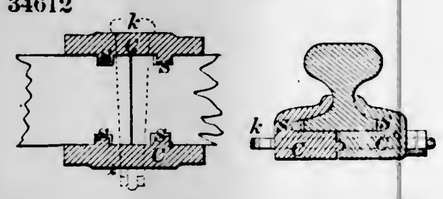
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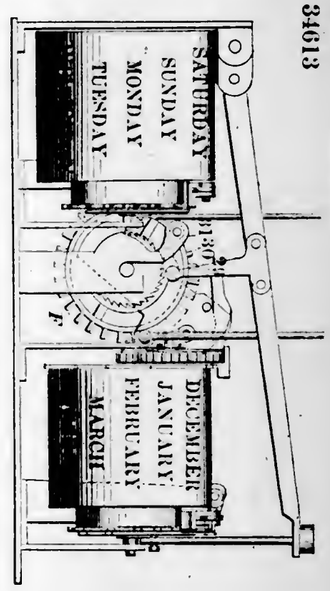
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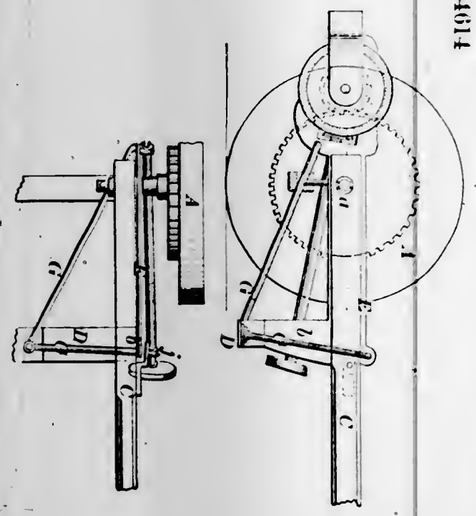
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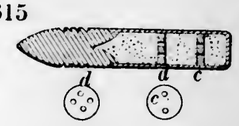
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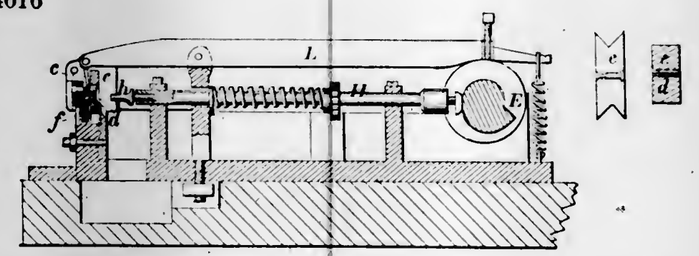
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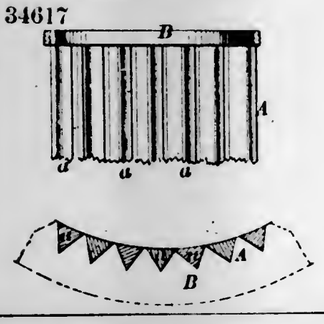
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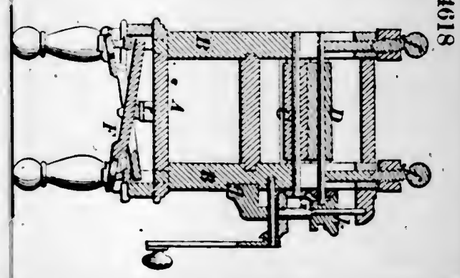
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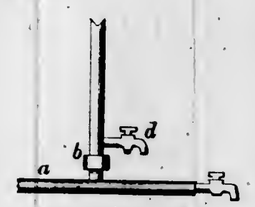
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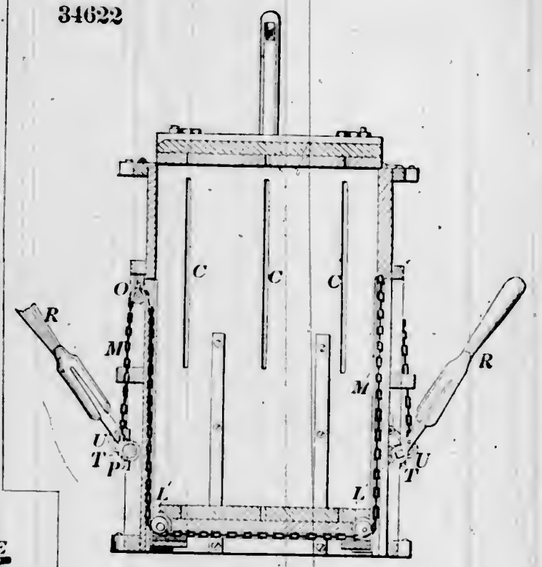
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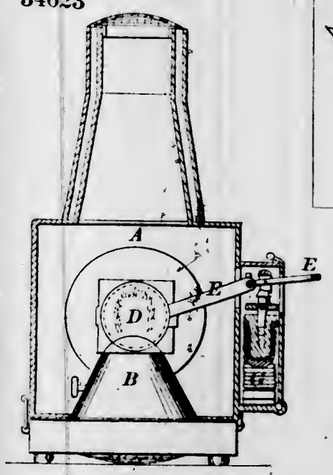
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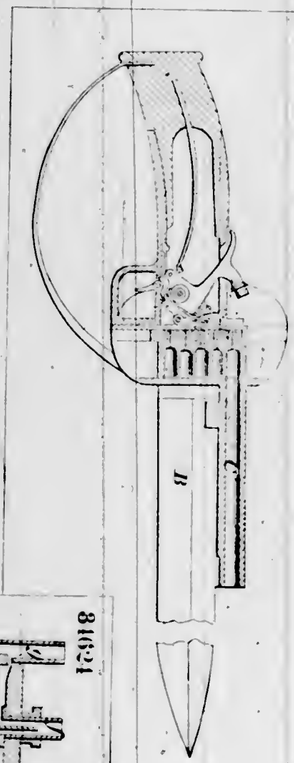
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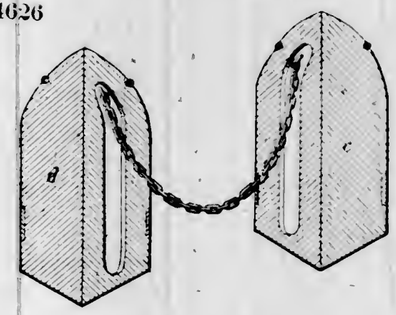
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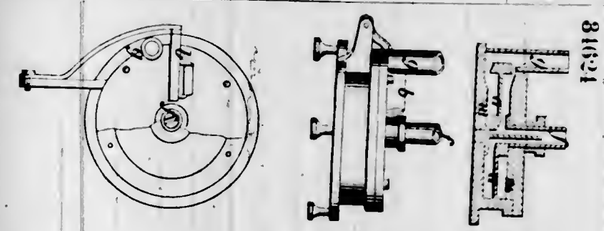


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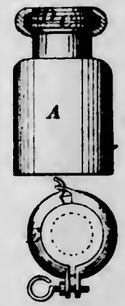


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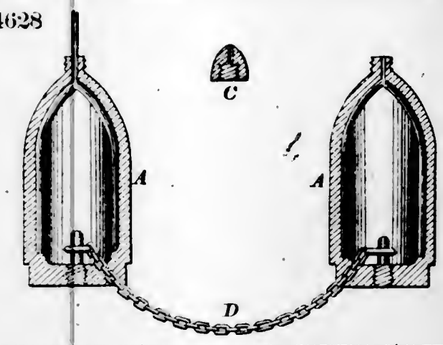




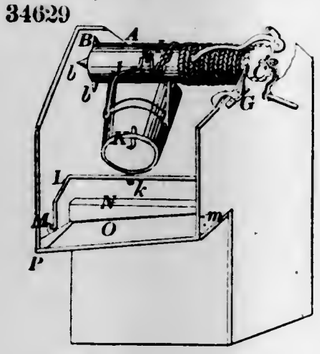
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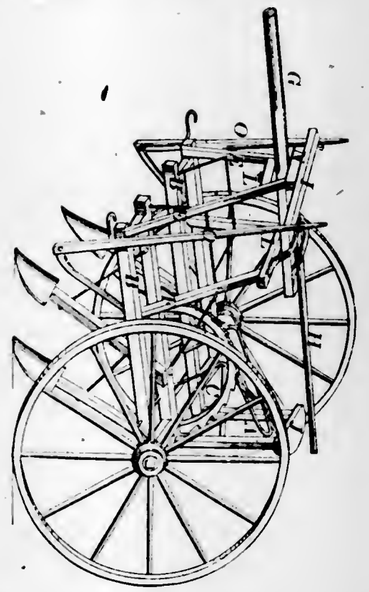
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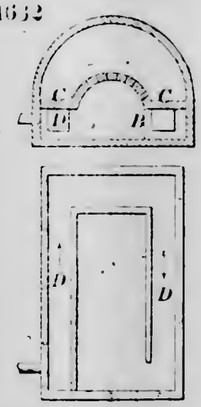
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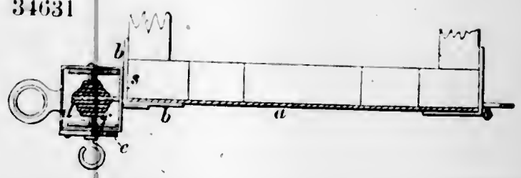
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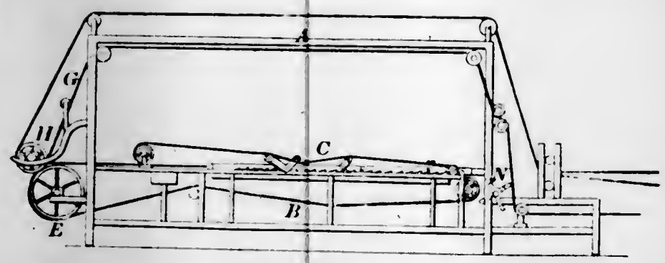
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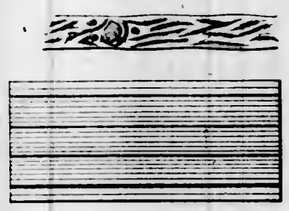
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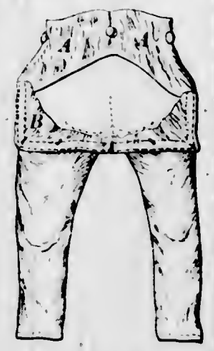
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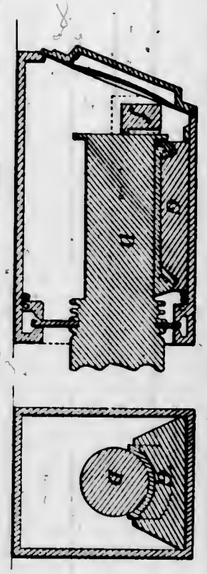
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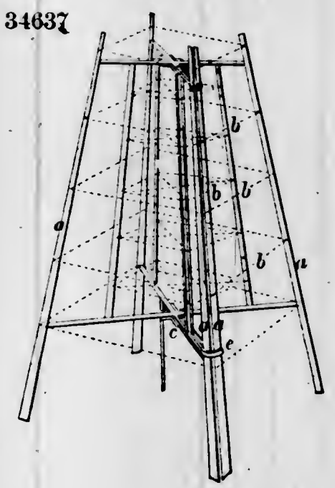
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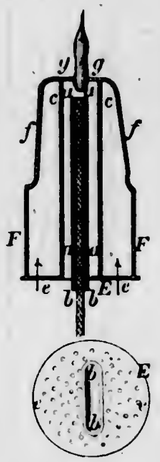
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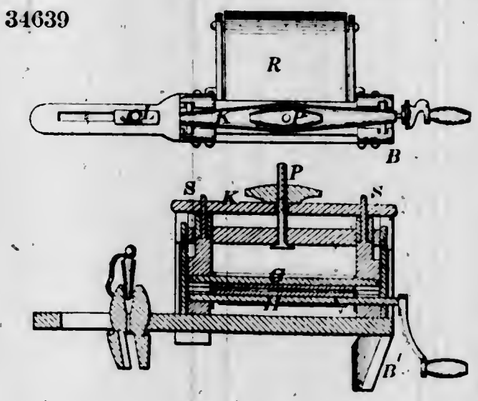
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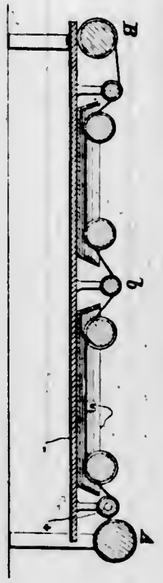
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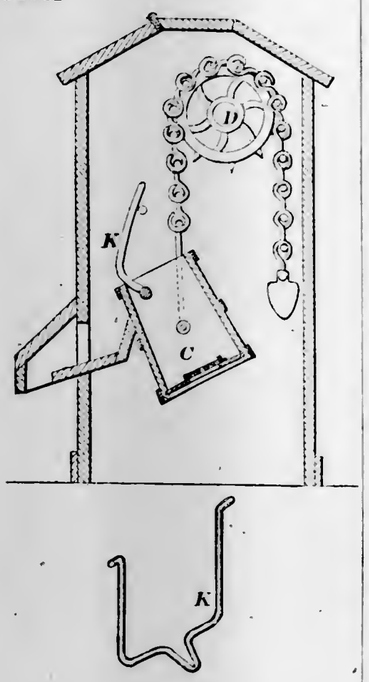
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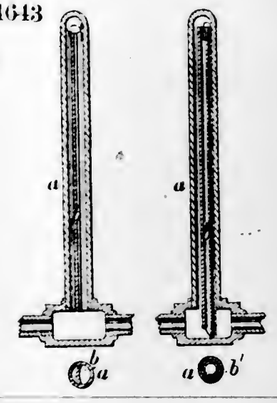
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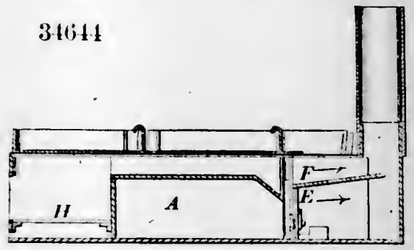
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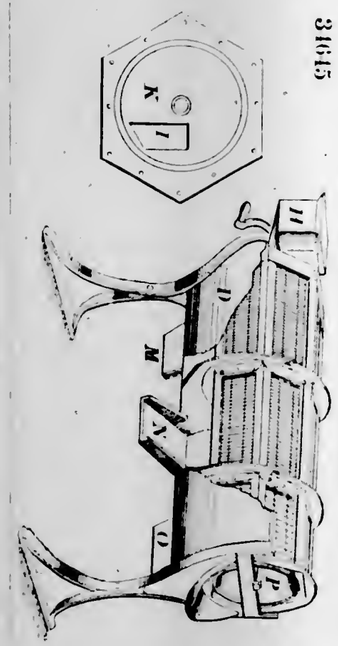
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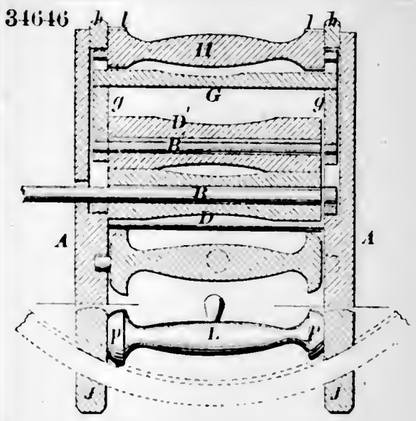
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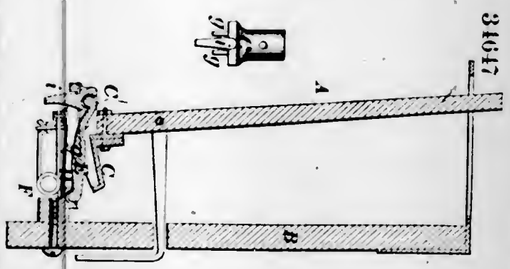
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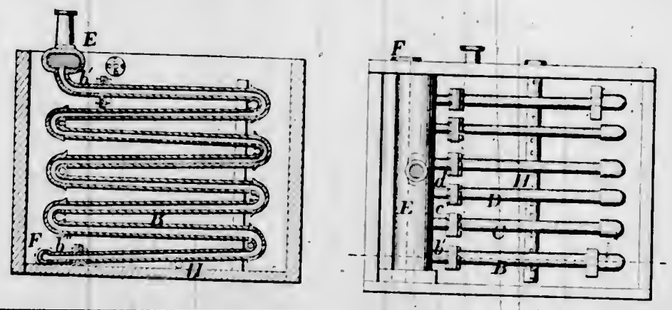
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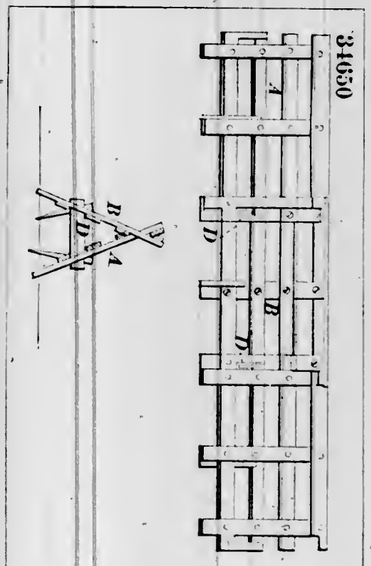
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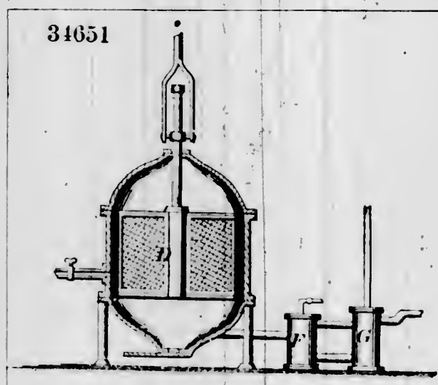
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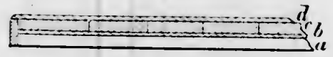
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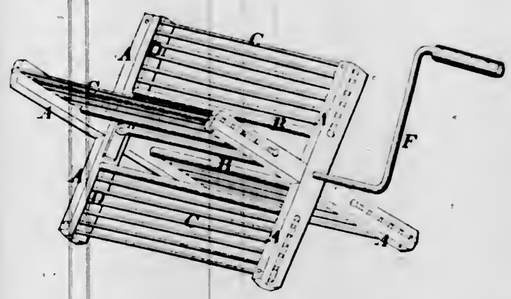
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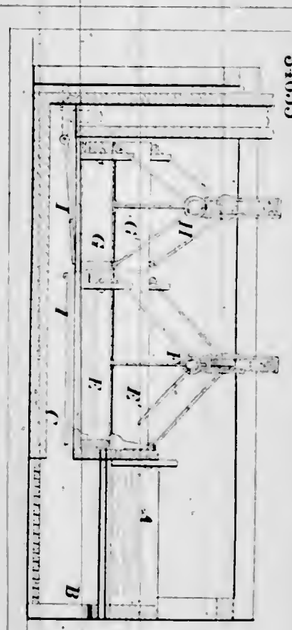
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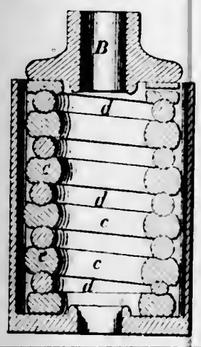
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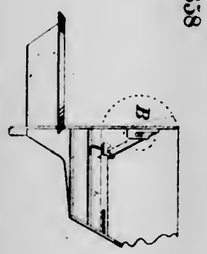
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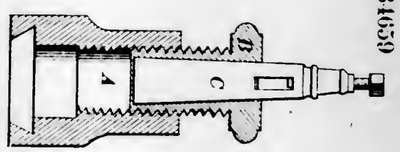
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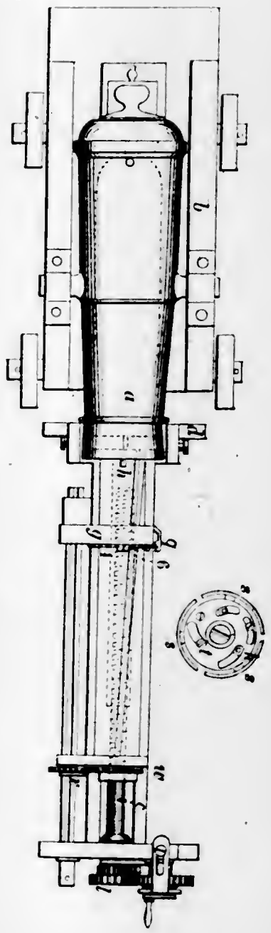
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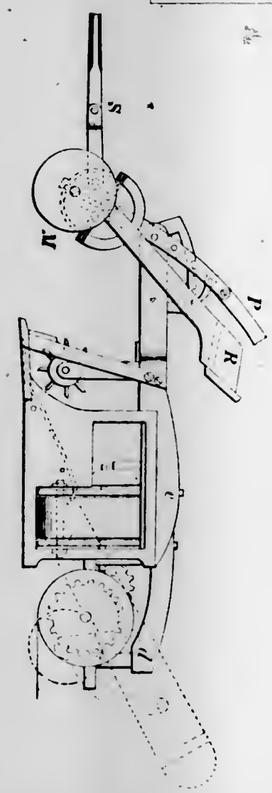
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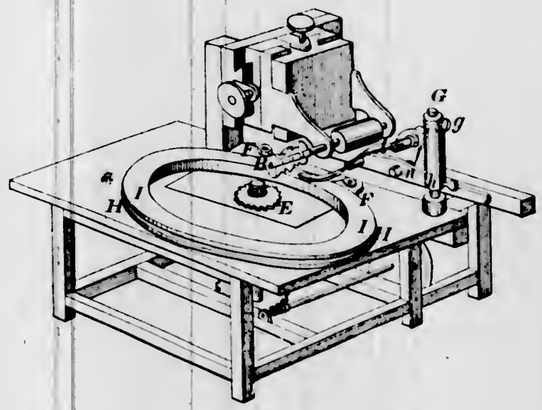
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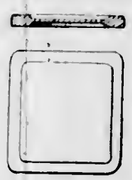
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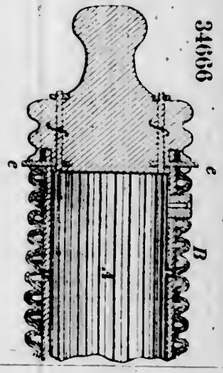
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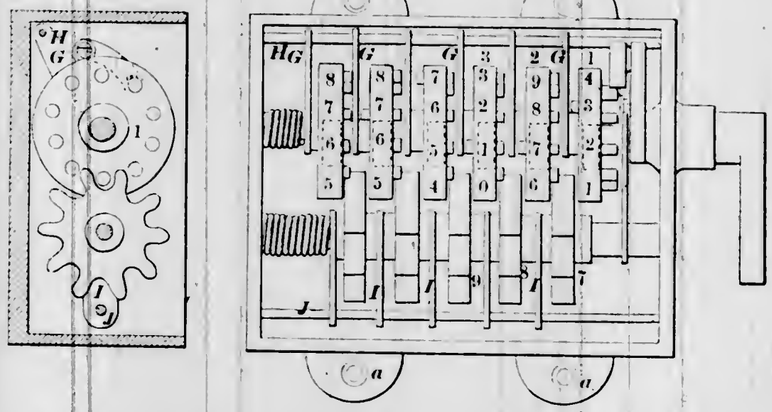
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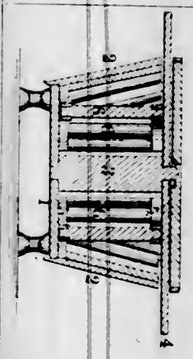
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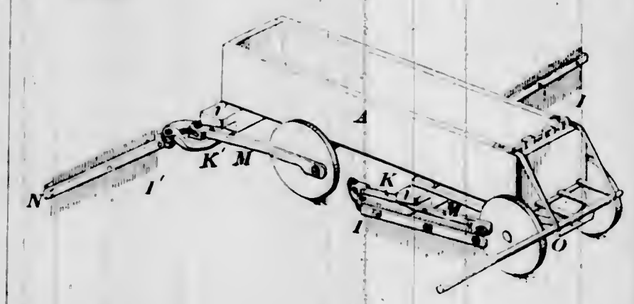
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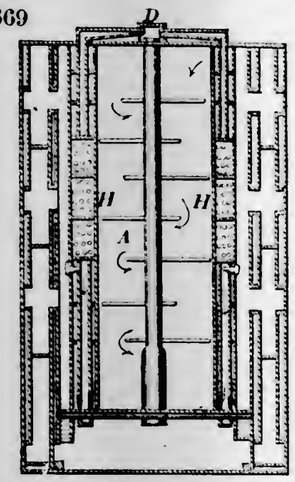
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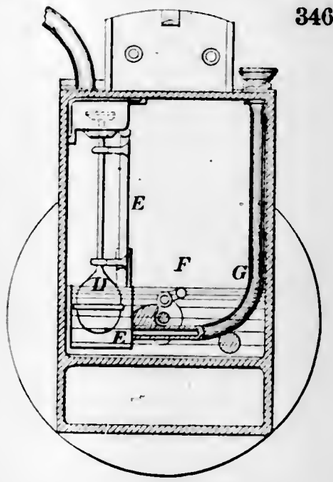
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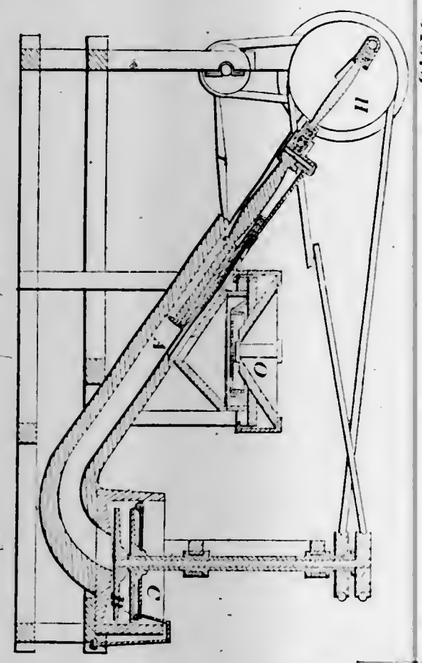
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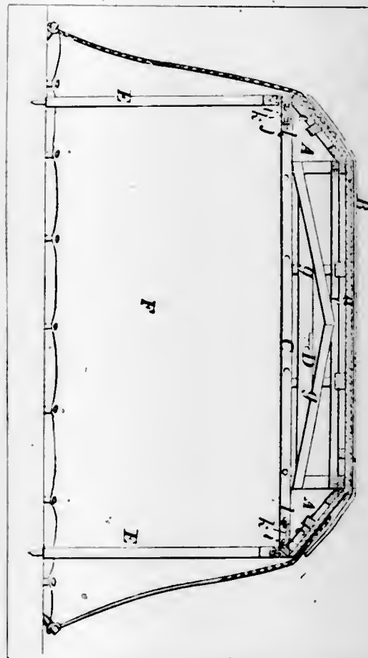
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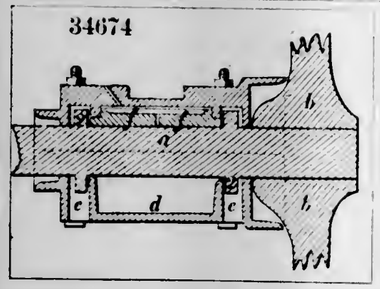
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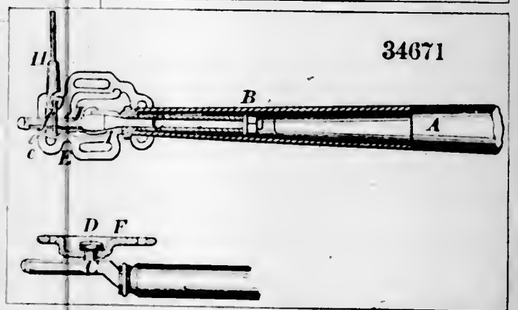
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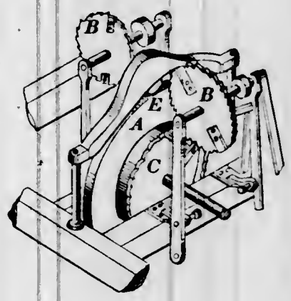
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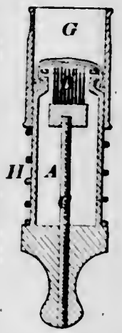
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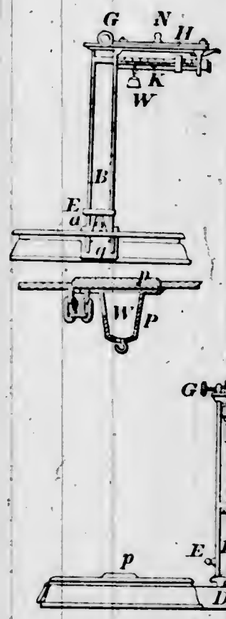
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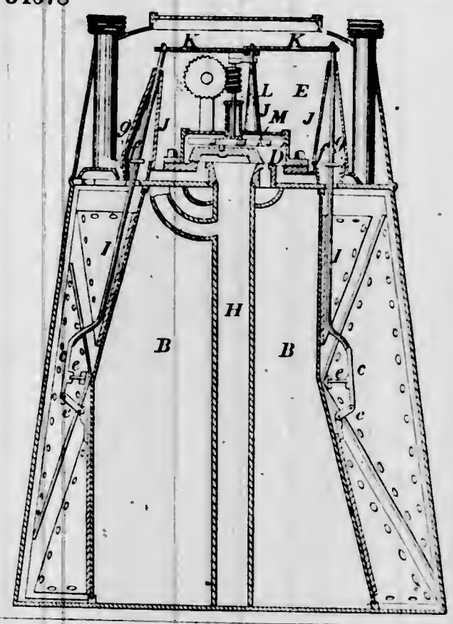
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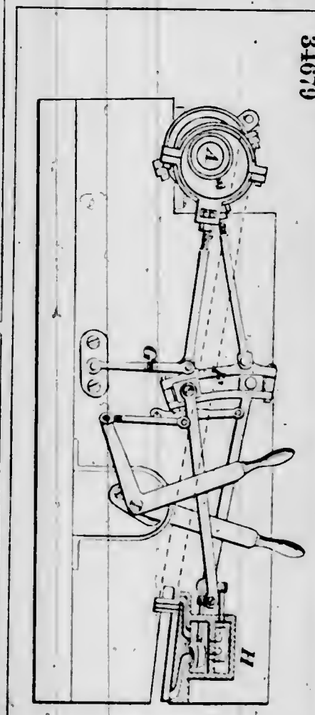
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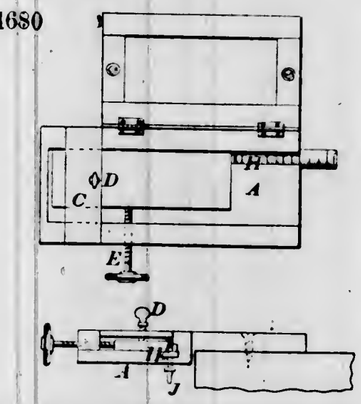
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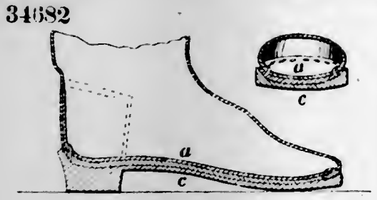
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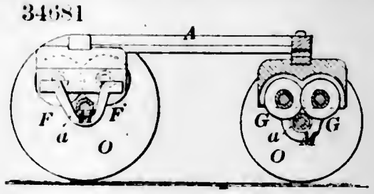
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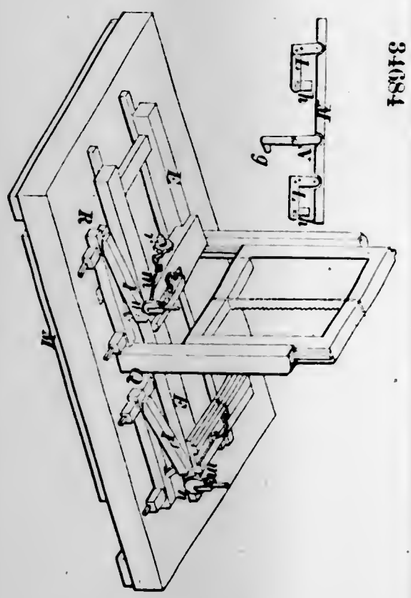
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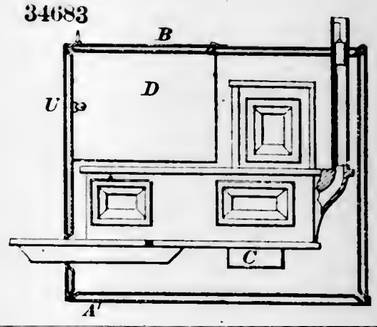
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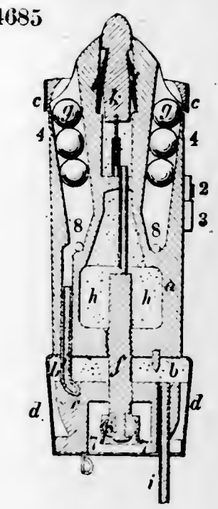
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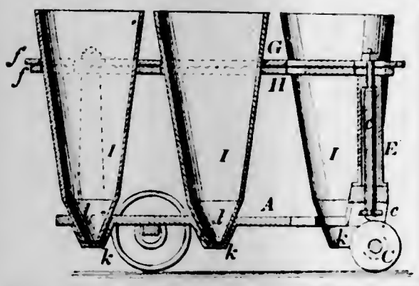
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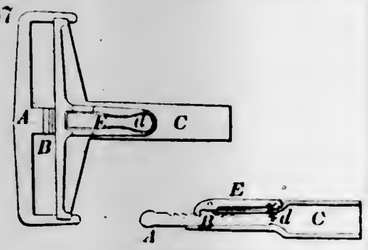
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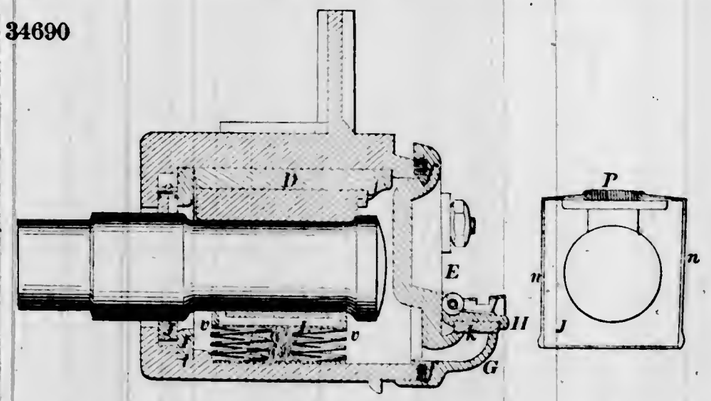
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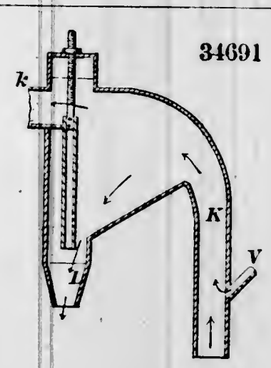
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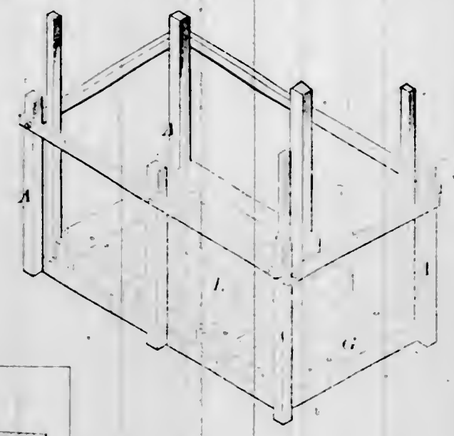
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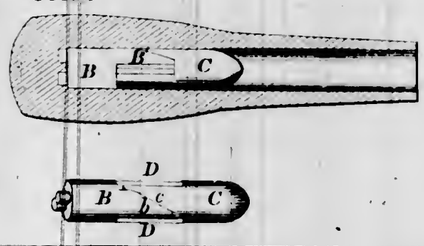
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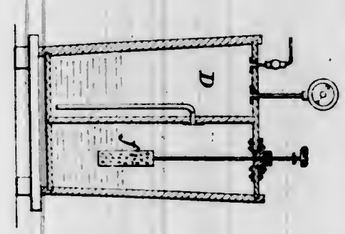
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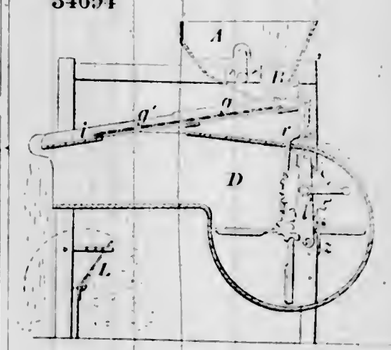
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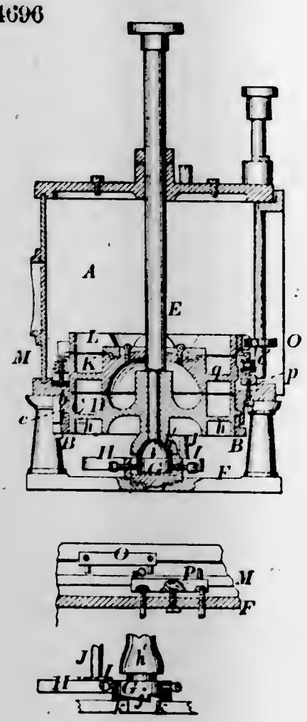
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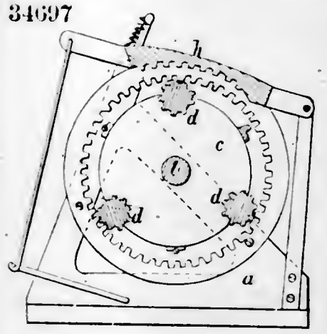
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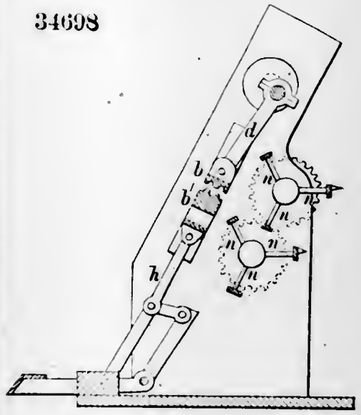
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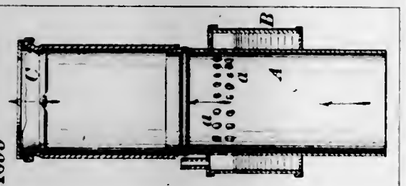
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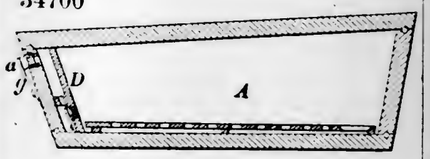
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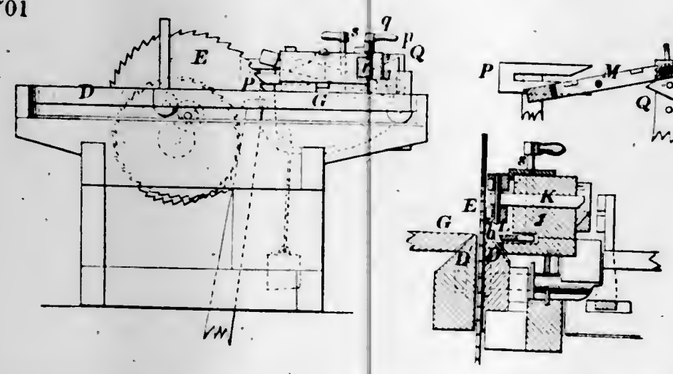
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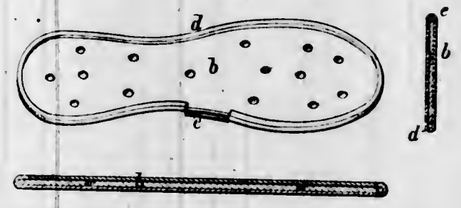
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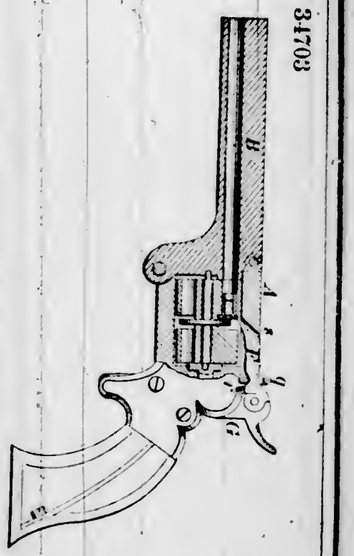
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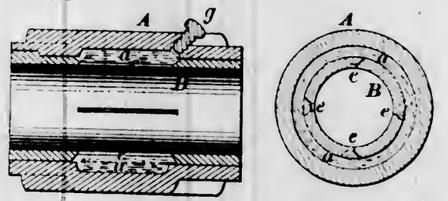
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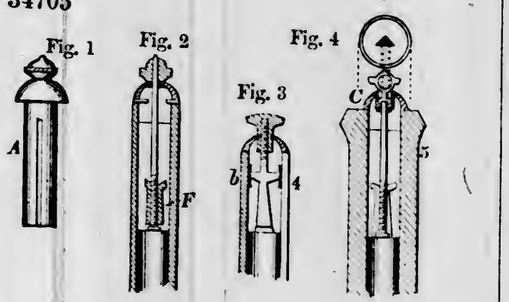
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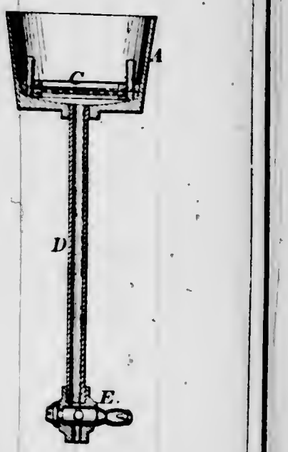
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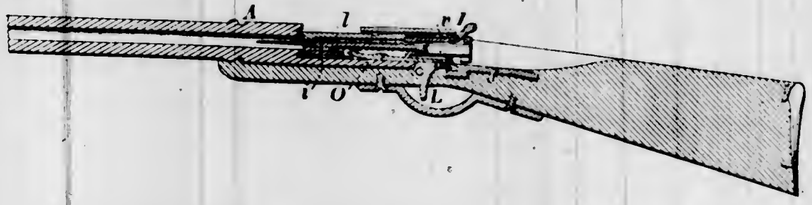
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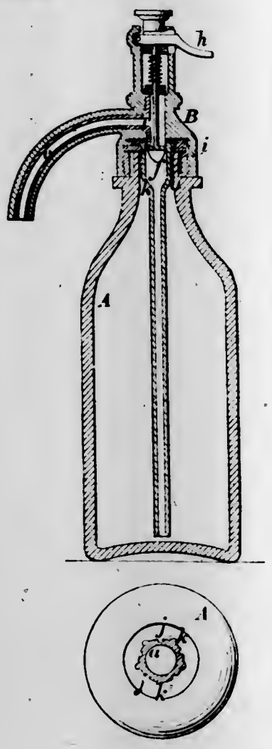
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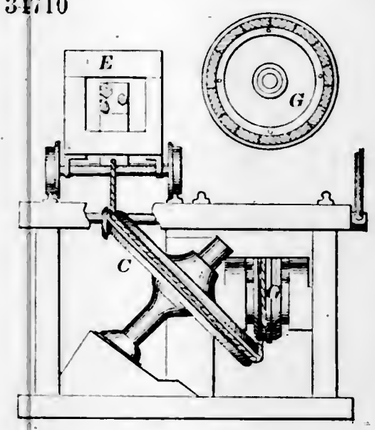
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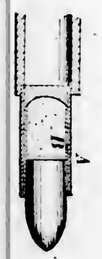
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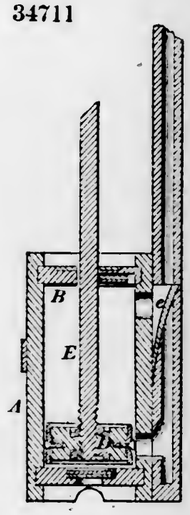
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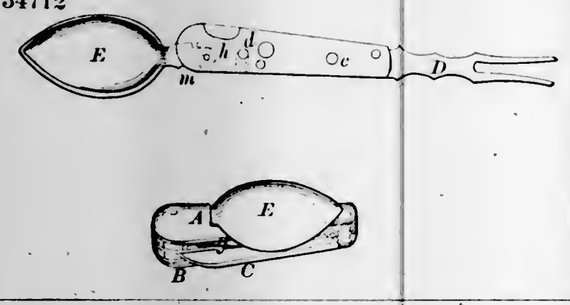
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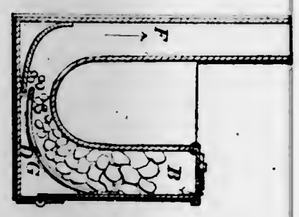
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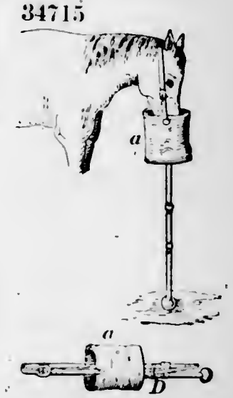
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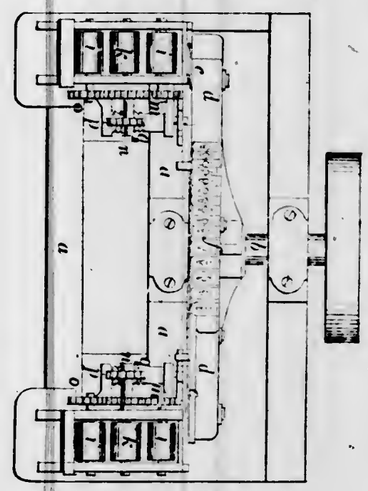
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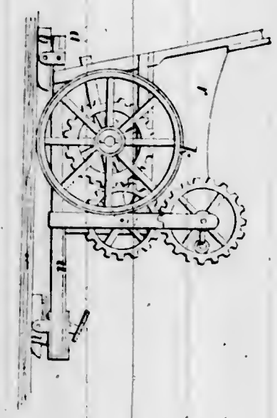
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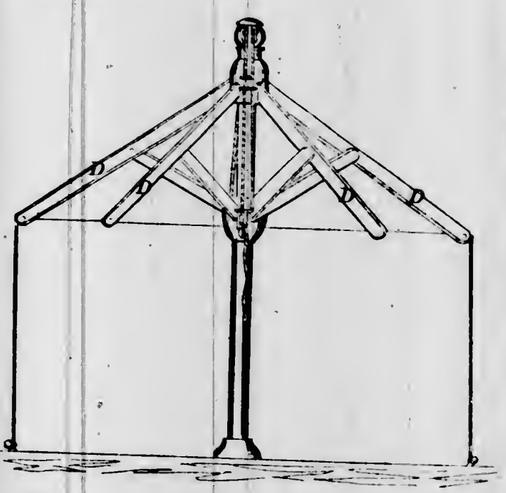
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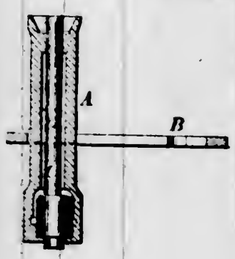
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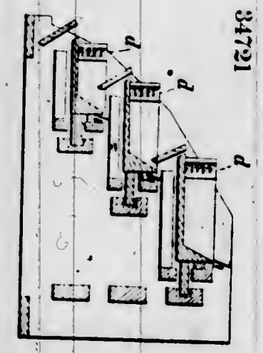
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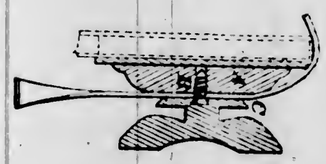
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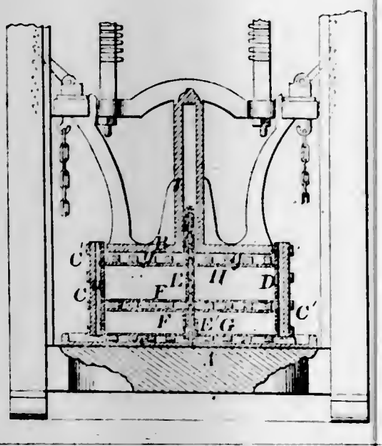
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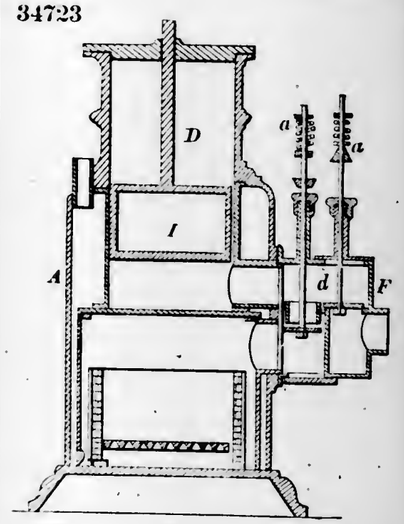
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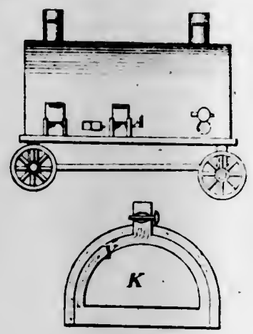
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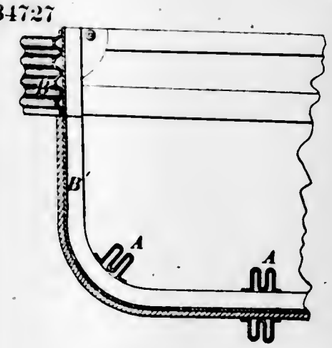
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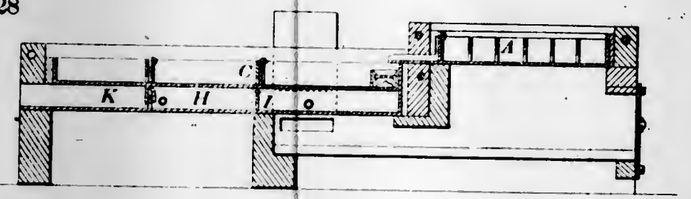
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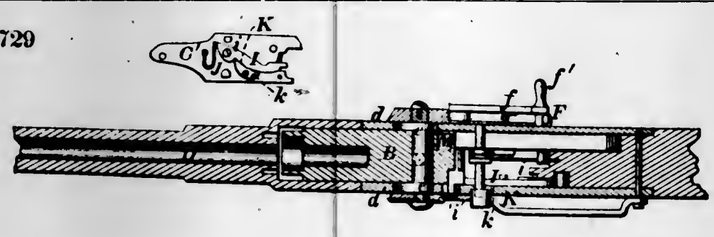
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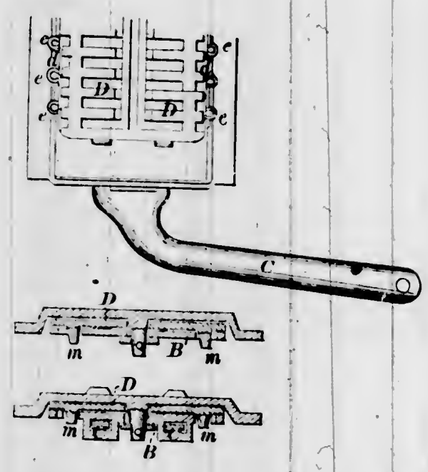
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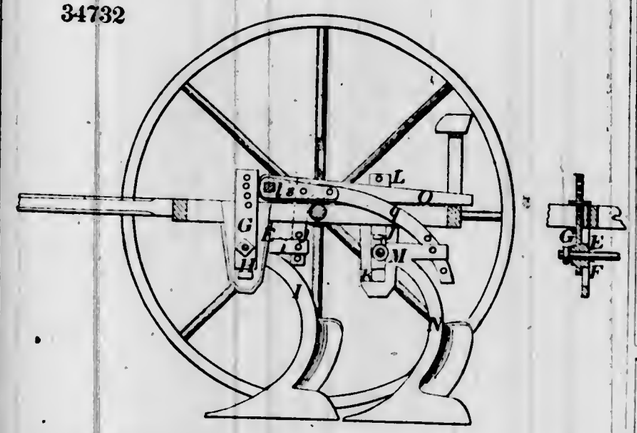
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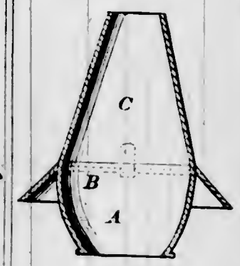
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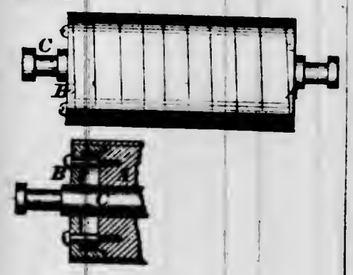
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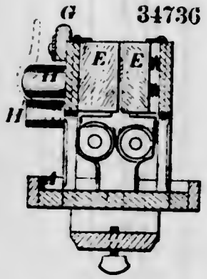
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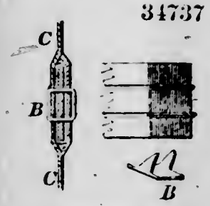
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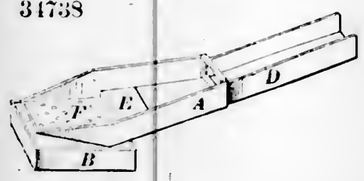
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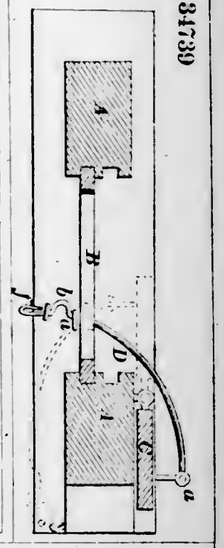
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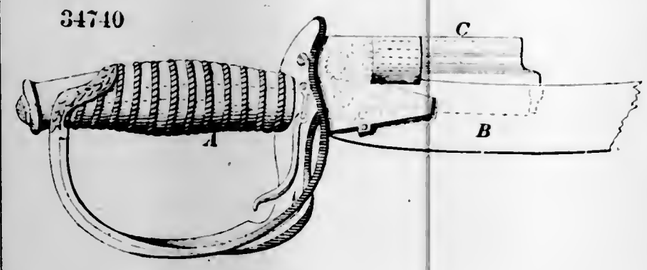
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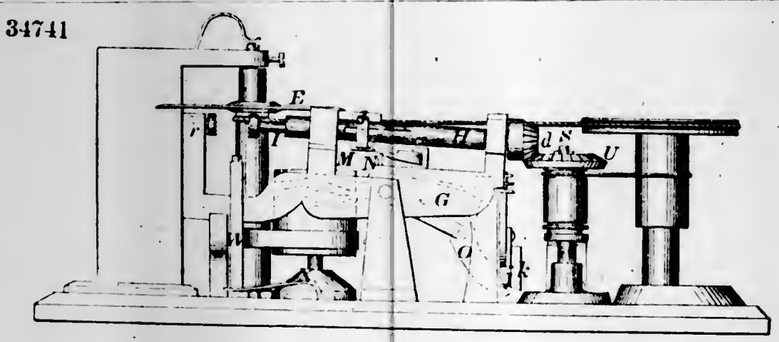
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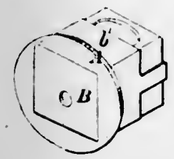
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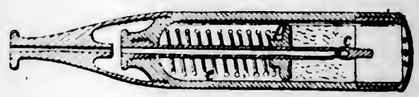
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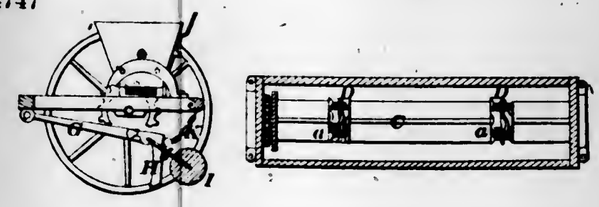
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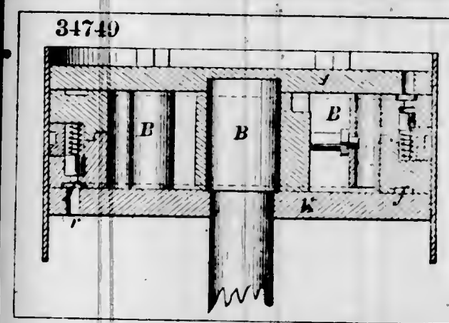
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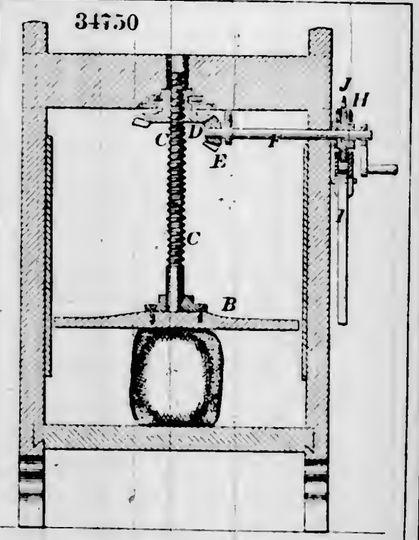
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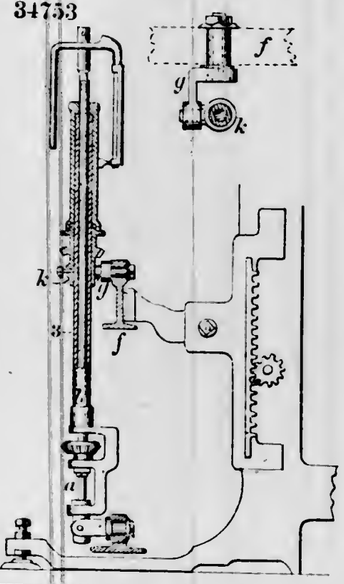
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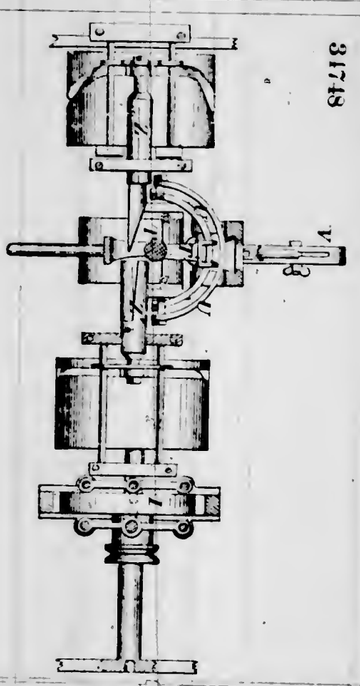
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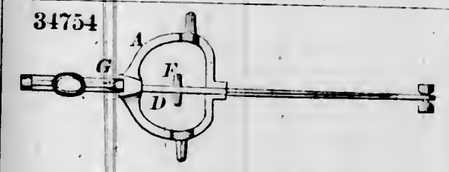
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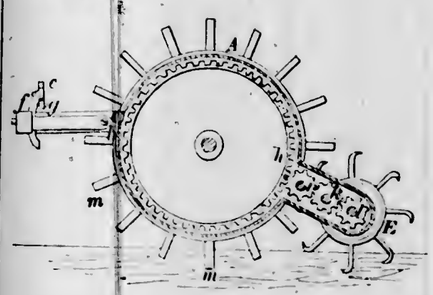
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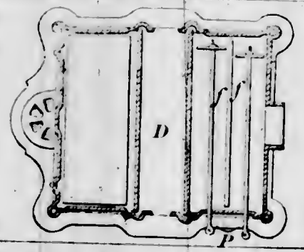
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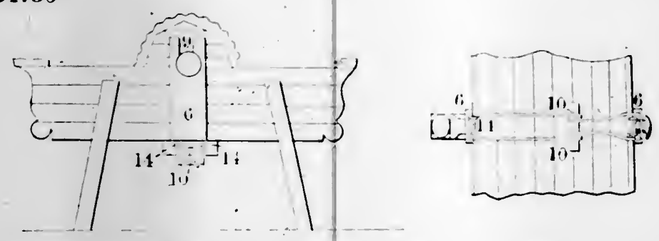
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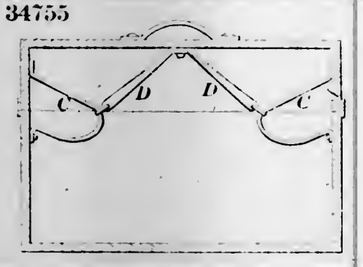
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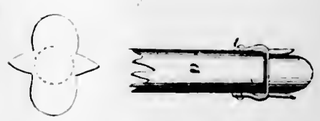
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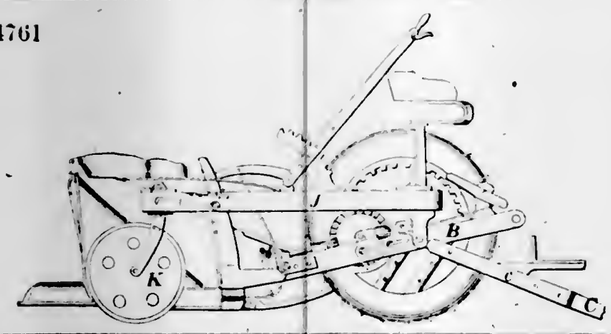


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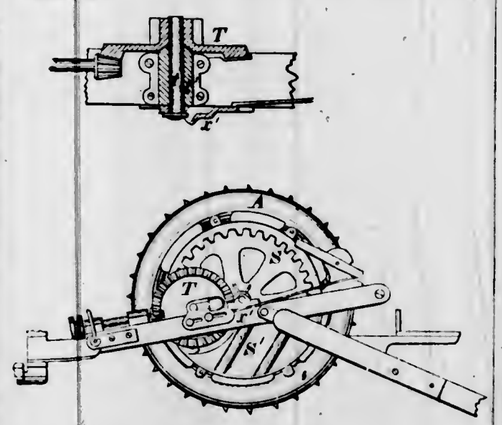


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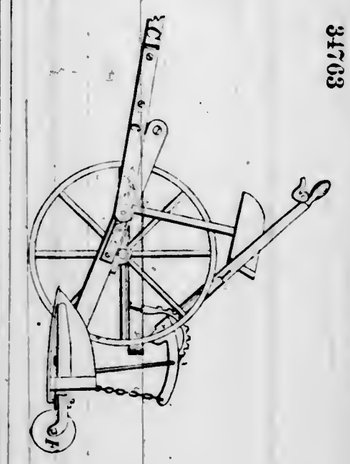
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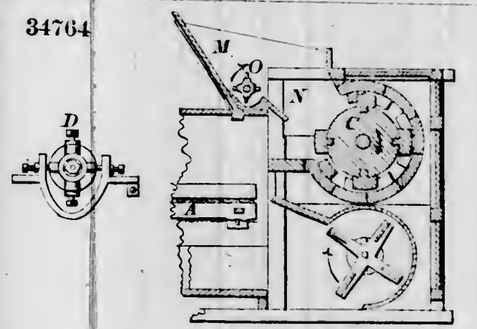
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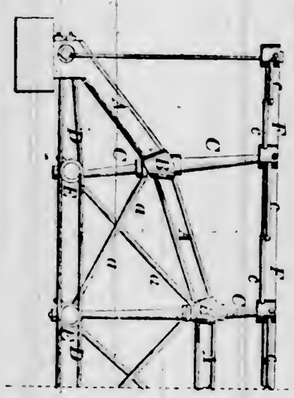
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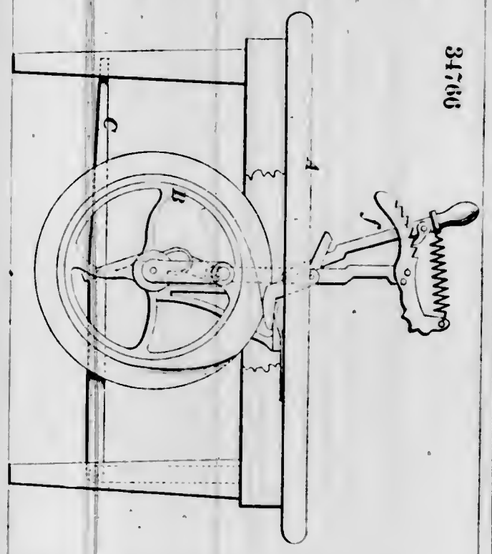
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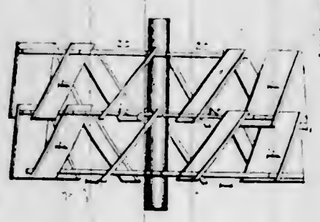
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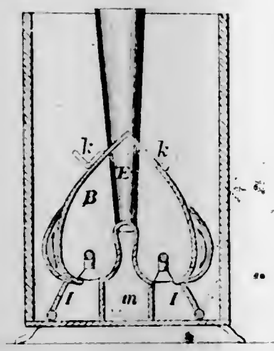
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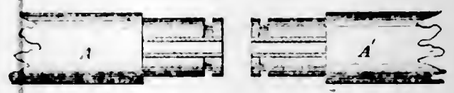
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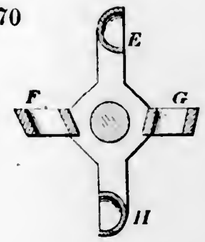
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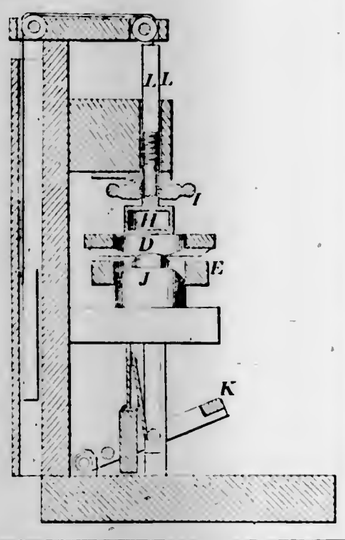
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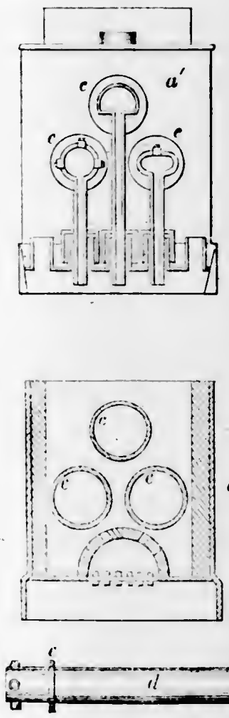
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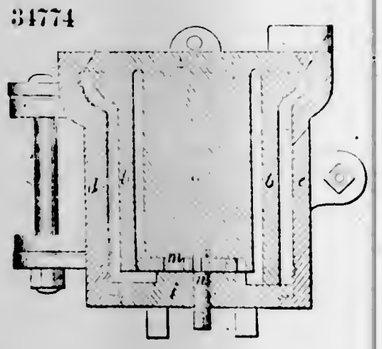
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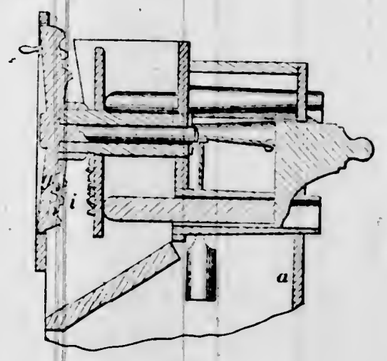
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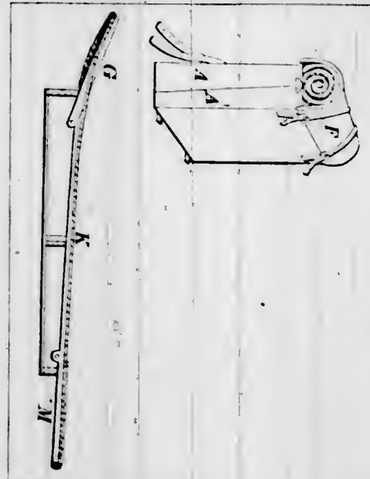
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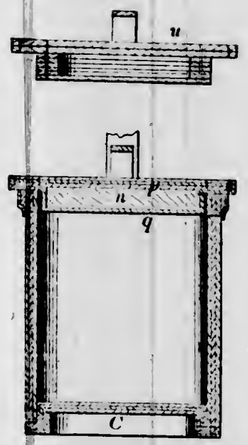
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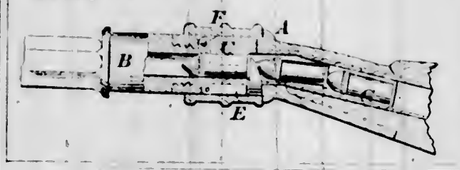
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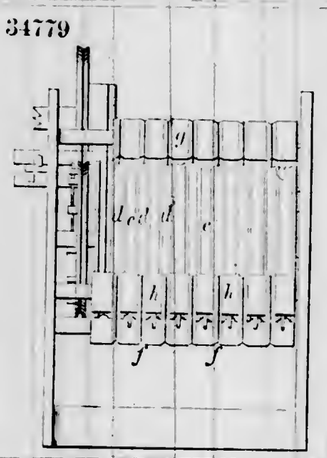
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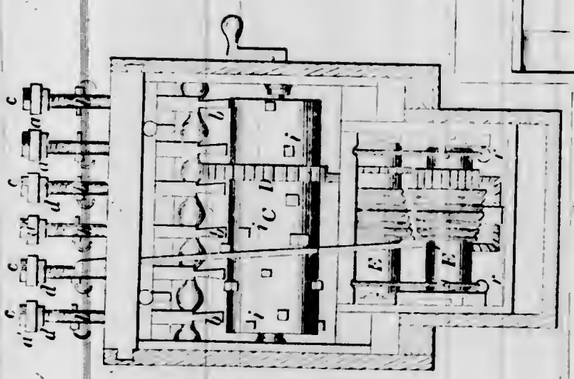
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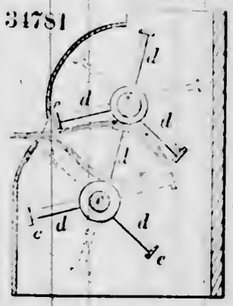
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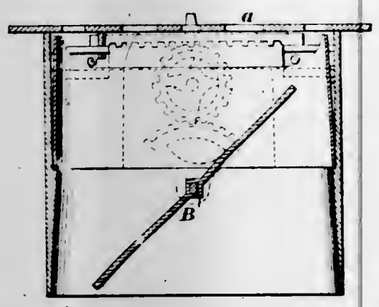
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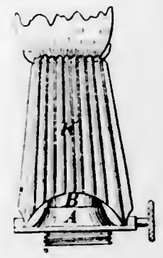
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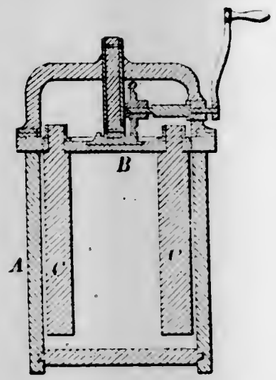
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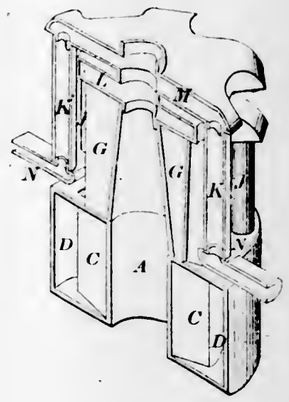
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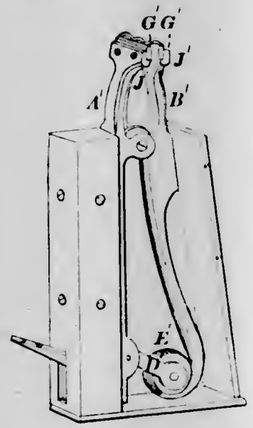
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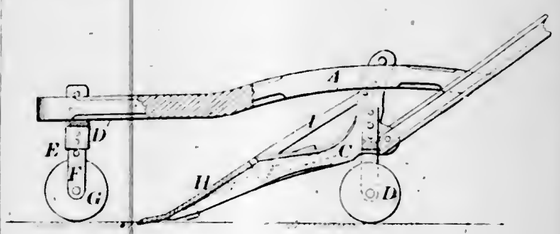
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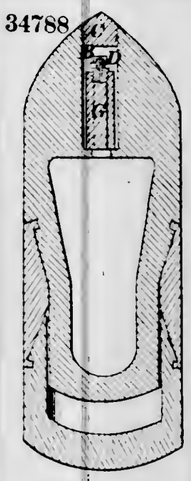
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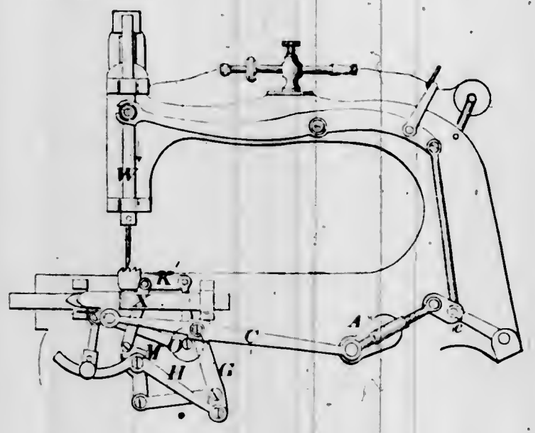
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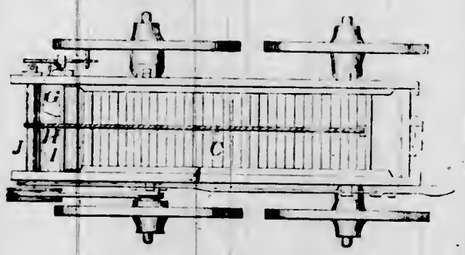
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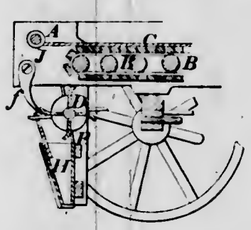


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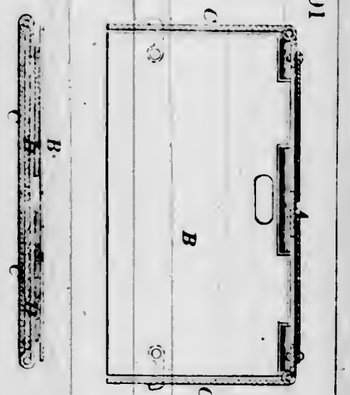


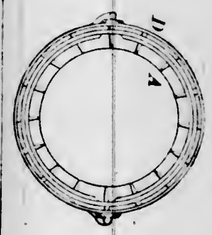
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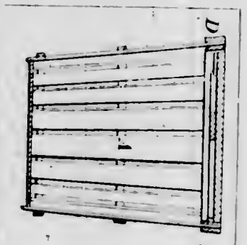


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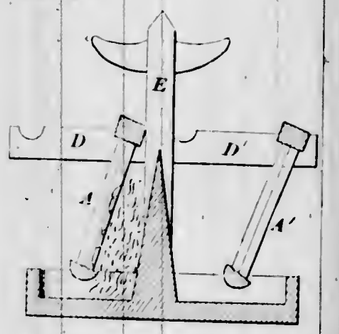




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Fig. 1

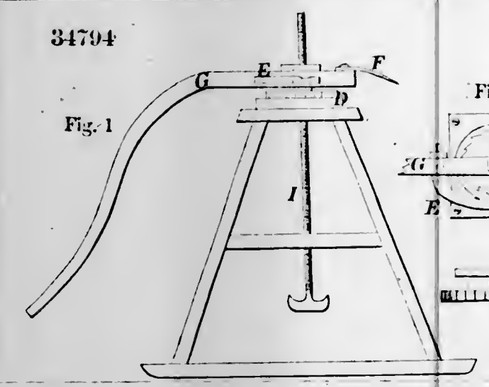


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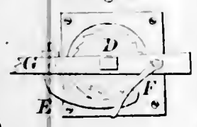
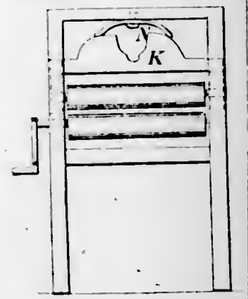
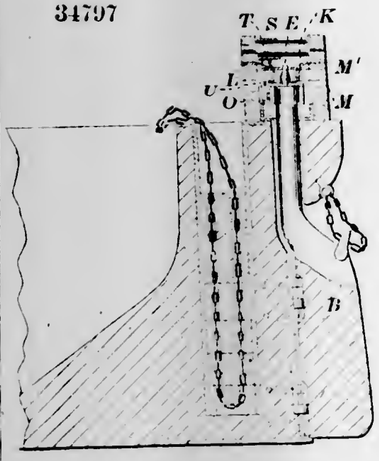


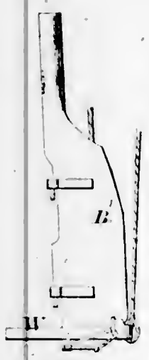
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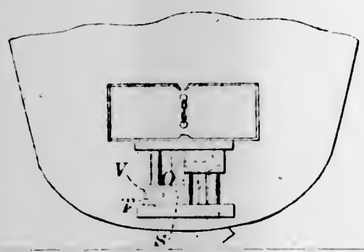
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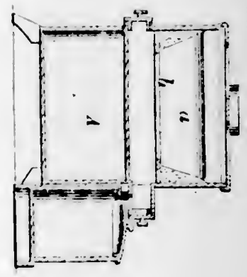
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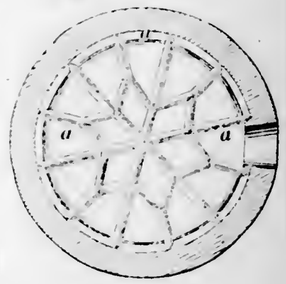




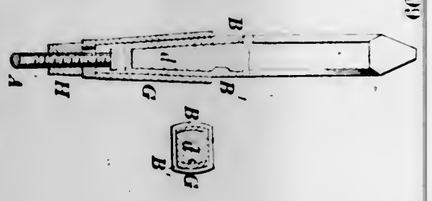
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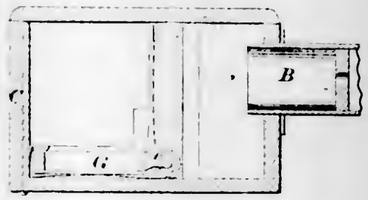
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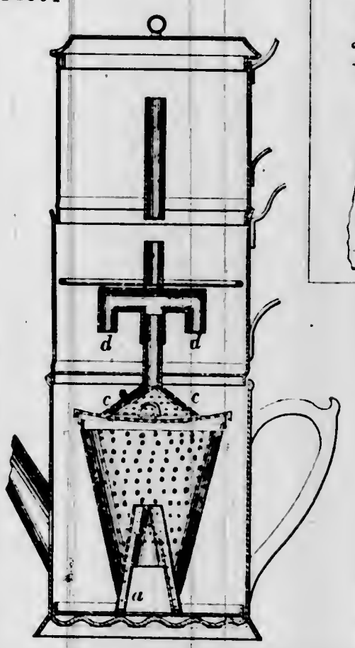
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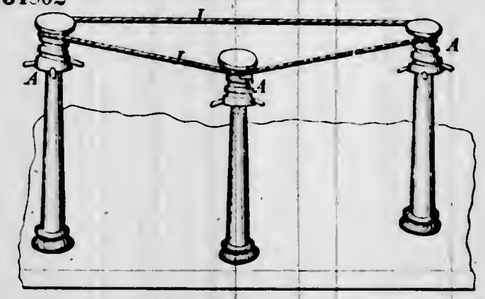
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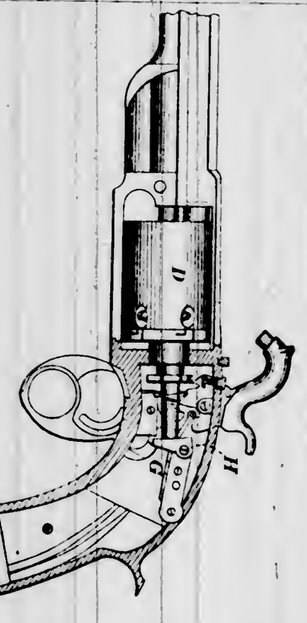
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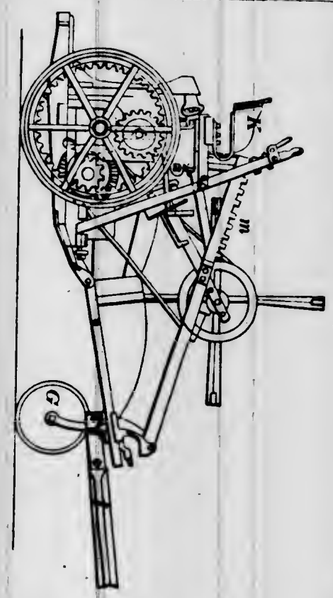
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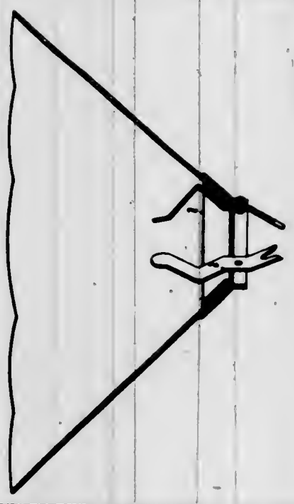
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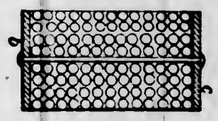
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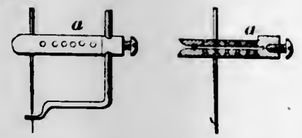
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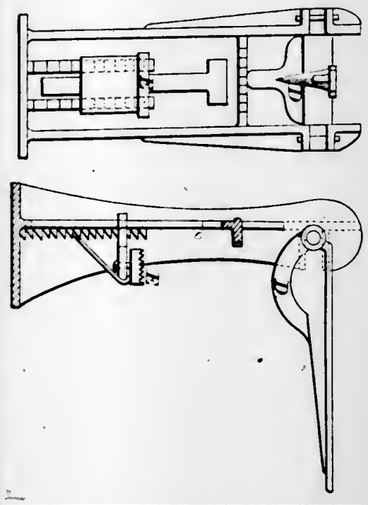
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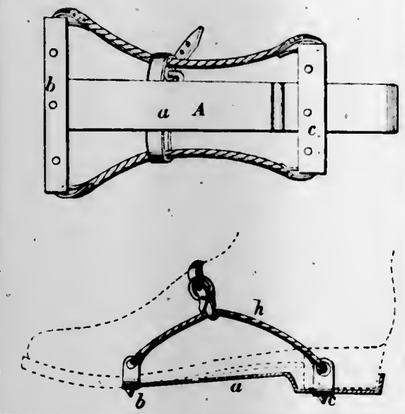
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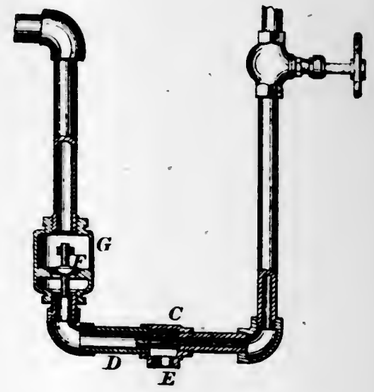
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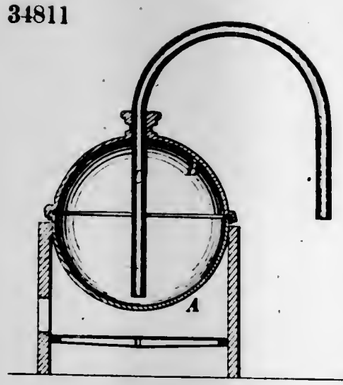
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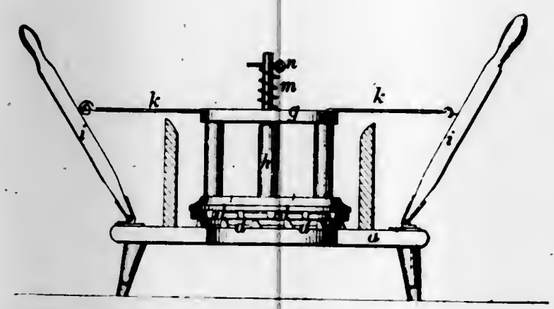
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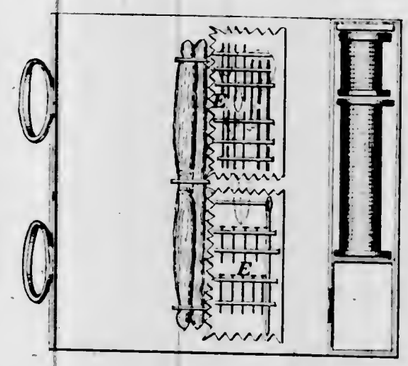
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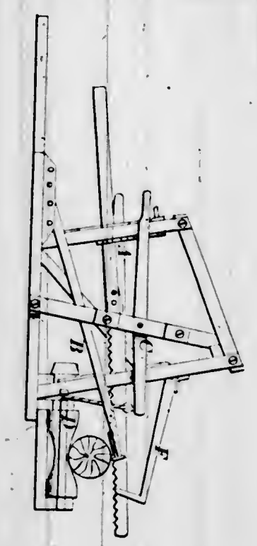
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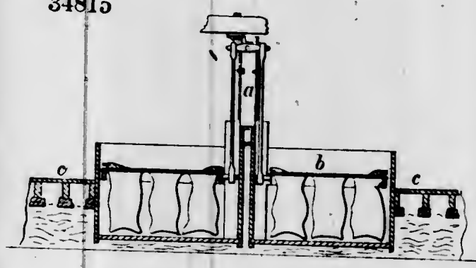
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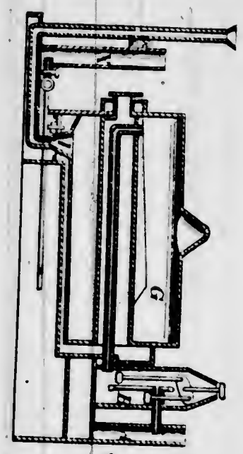
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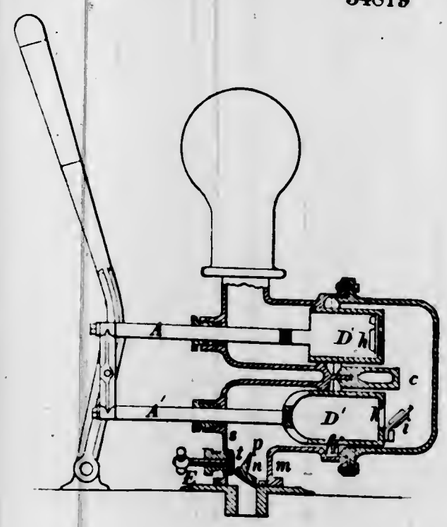
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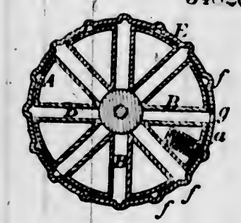
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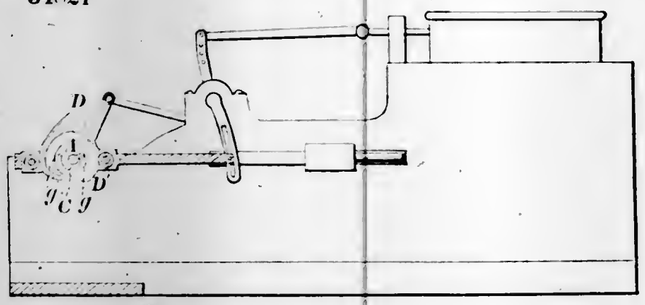
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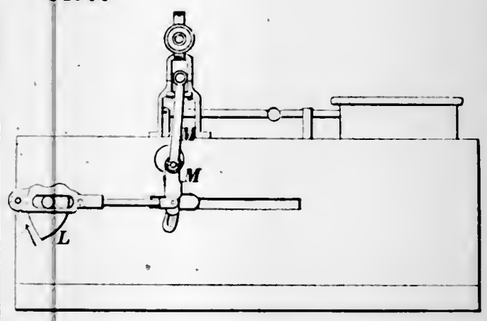


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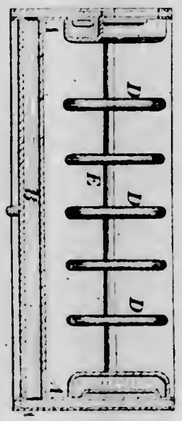




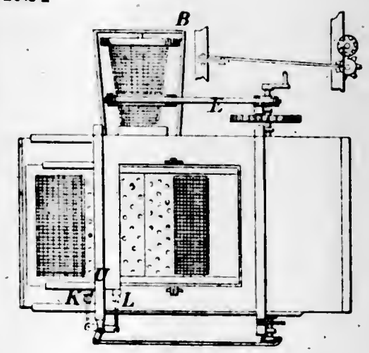
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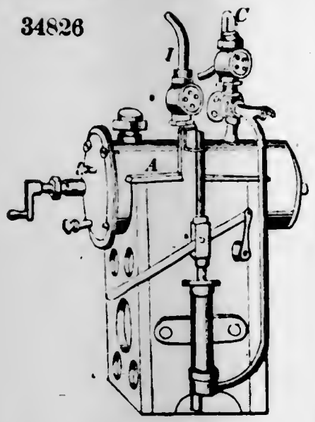
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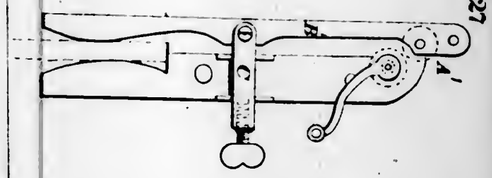
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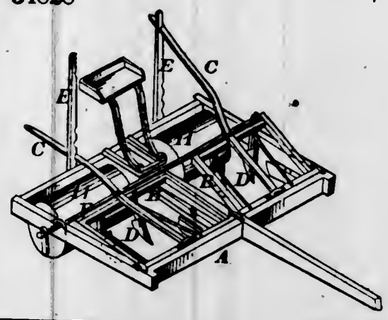
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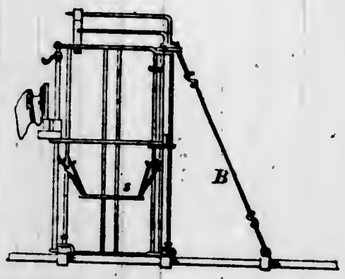
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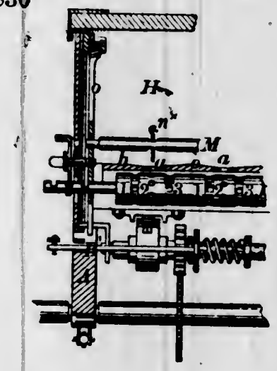
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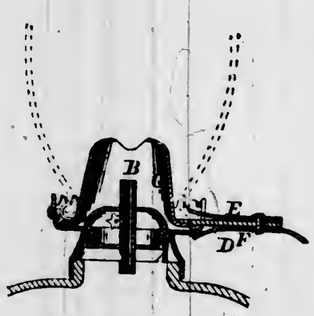
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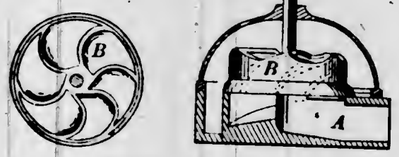
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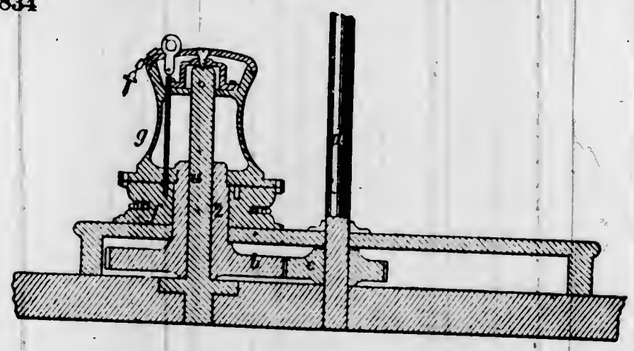
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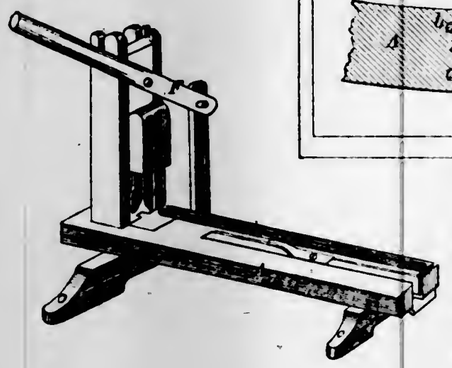
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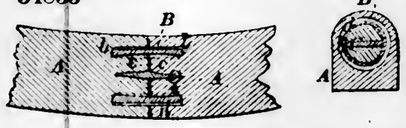
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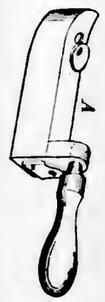
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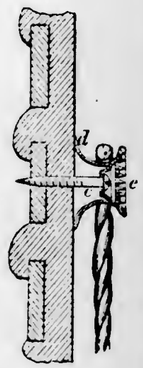
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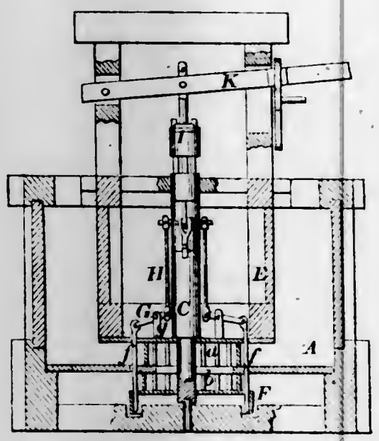
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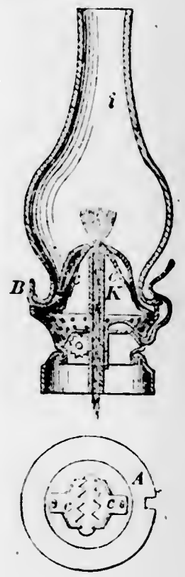
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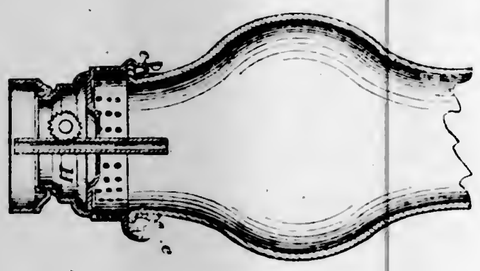
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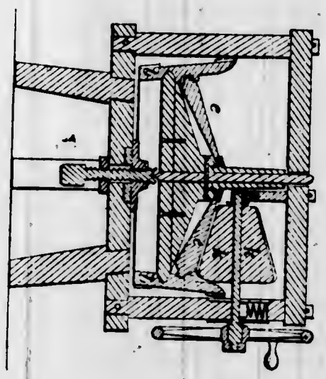
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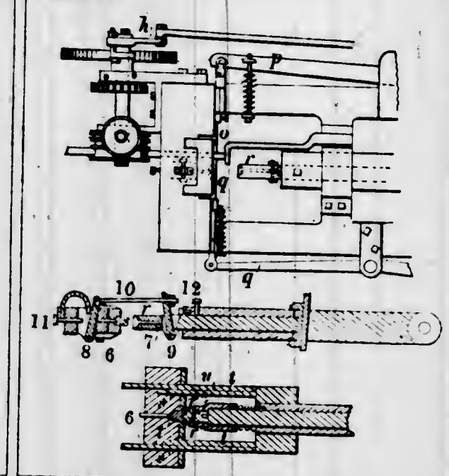
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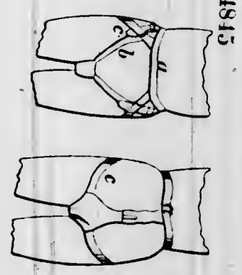
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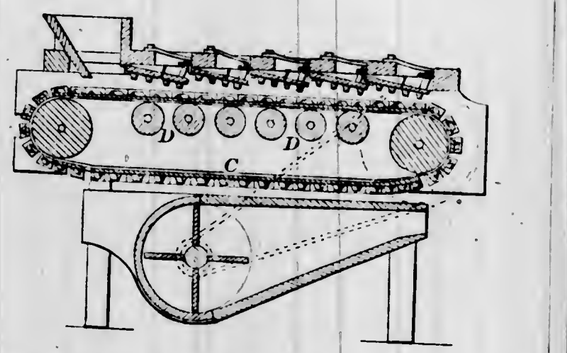
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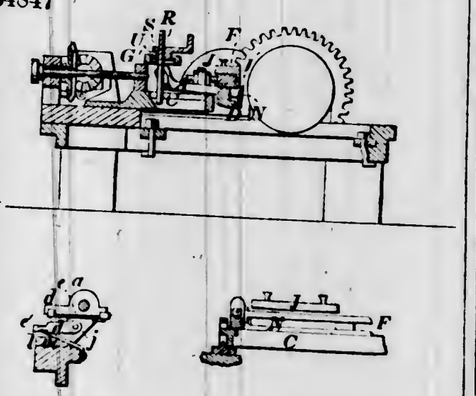
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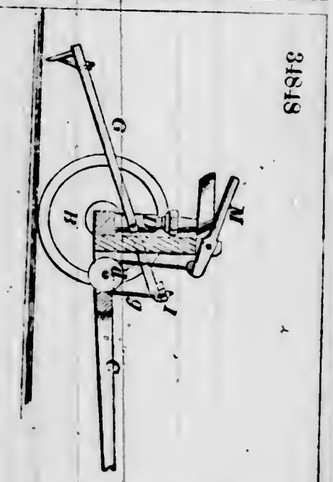
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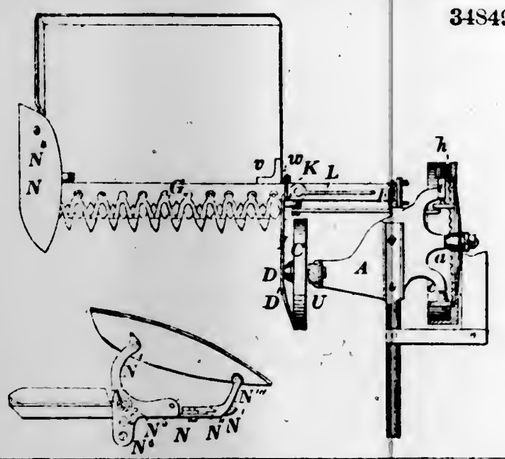
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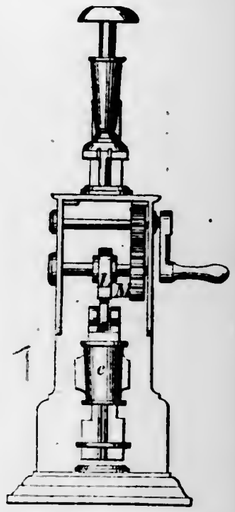
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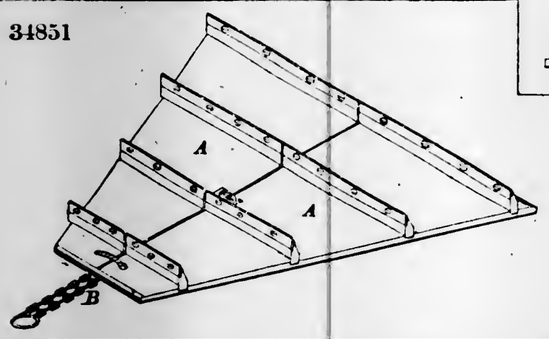
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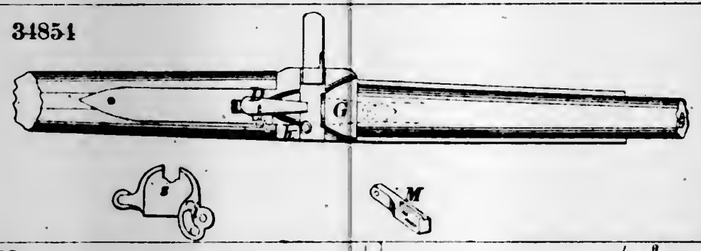
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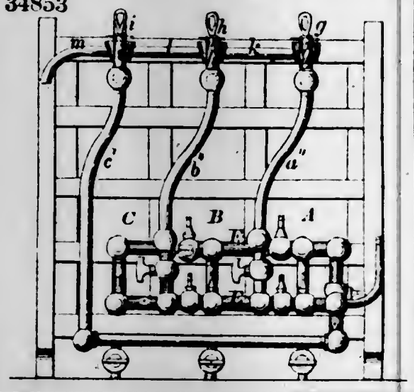
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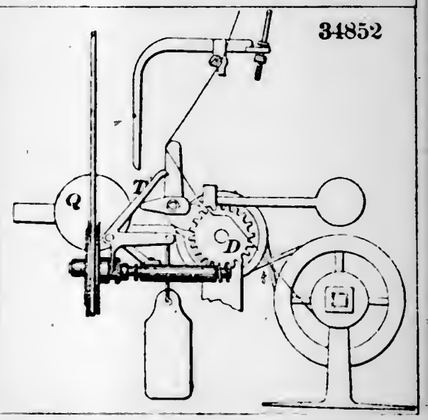
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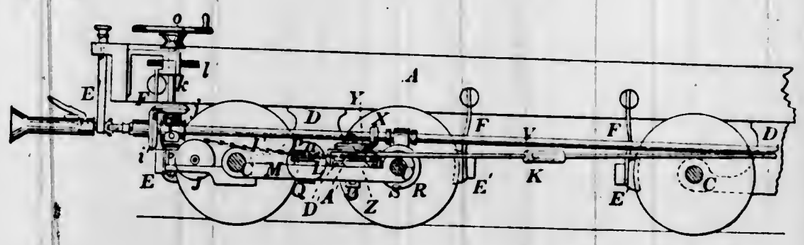
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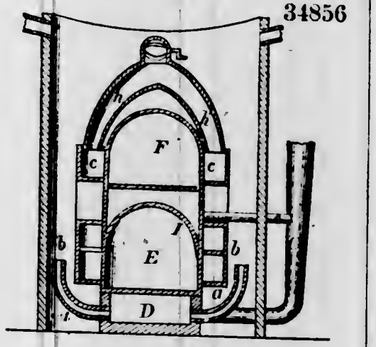
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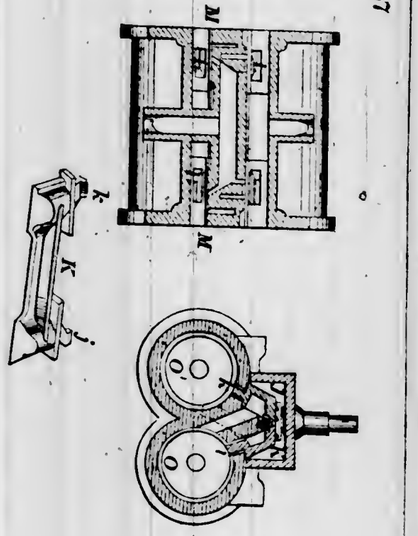
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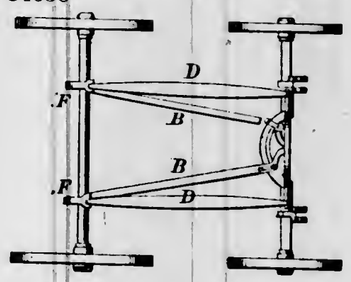
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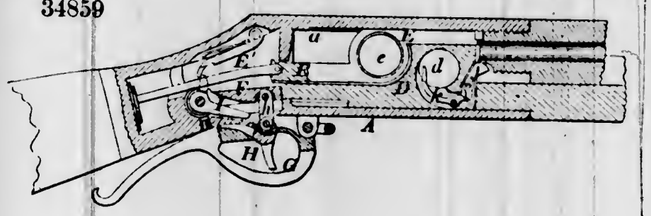
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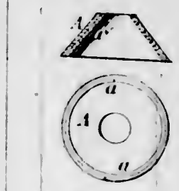
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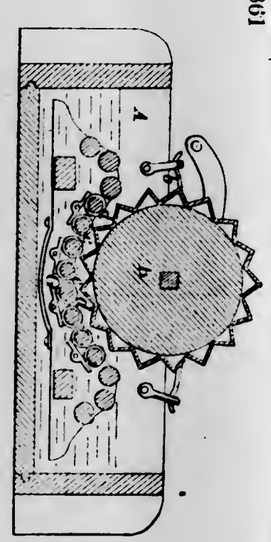
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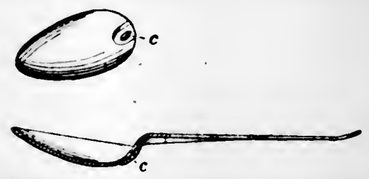
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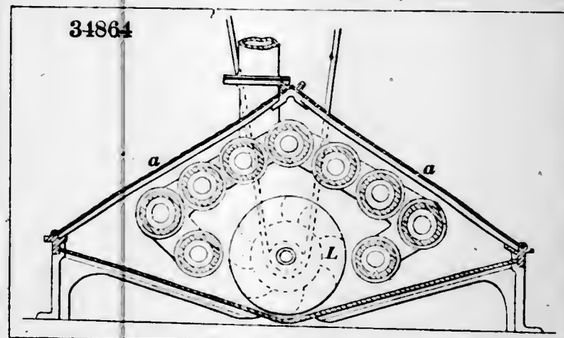
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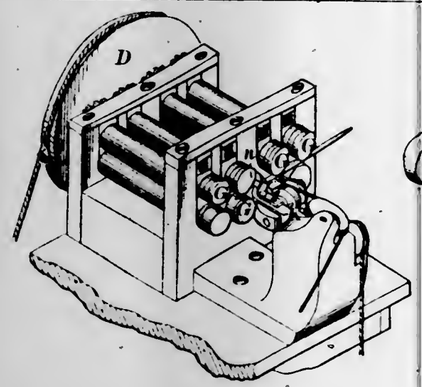
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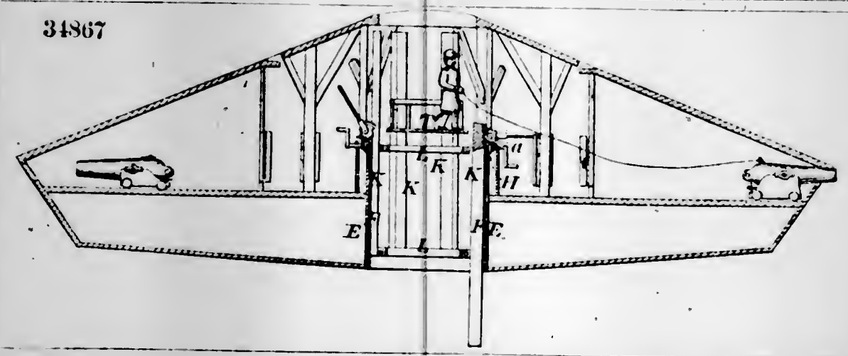
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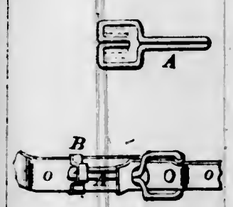
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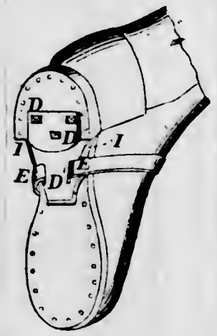
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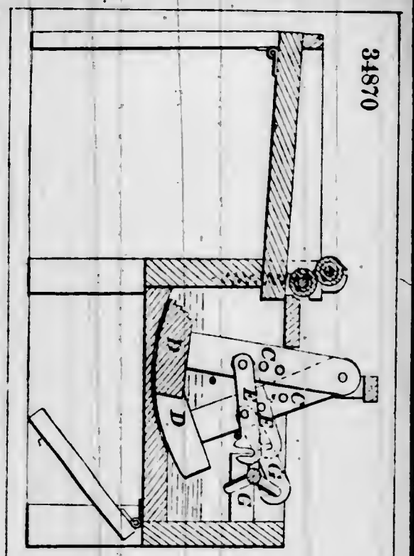
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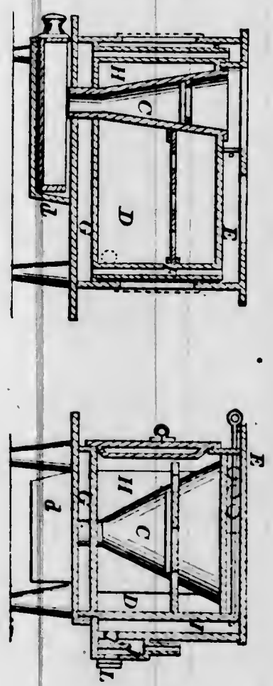
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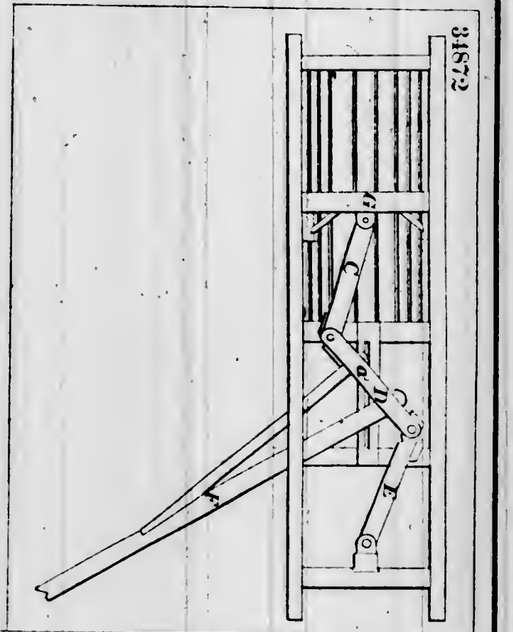
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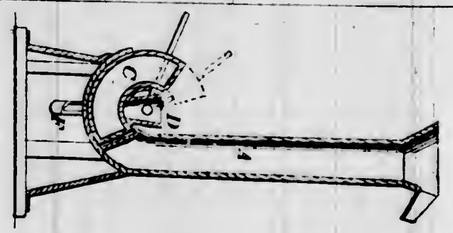
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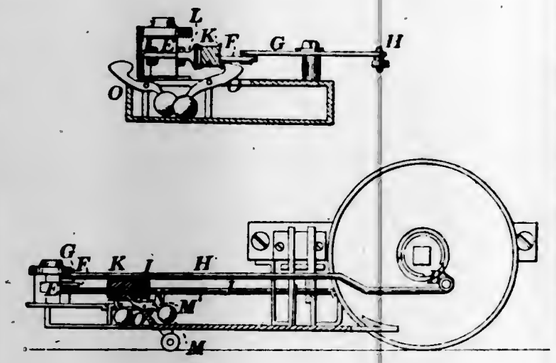


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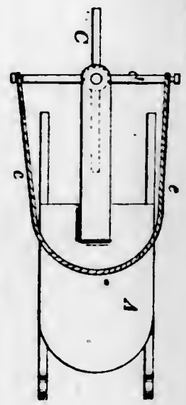
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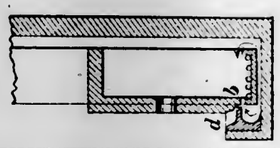
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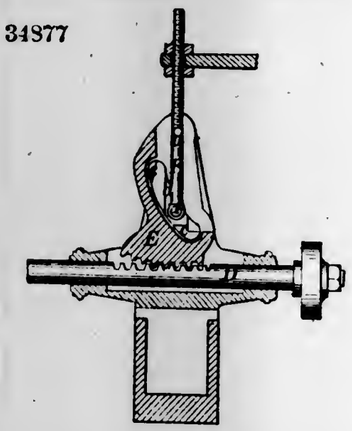
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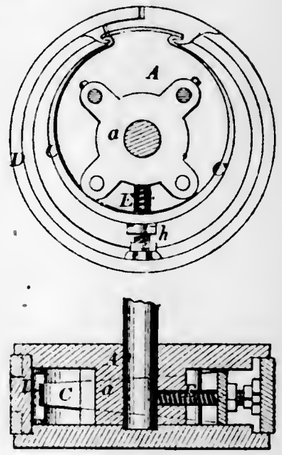
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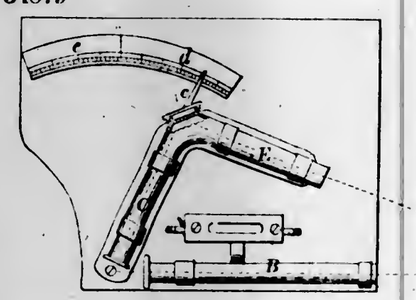
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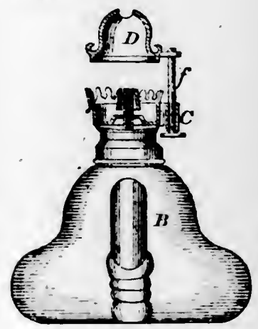
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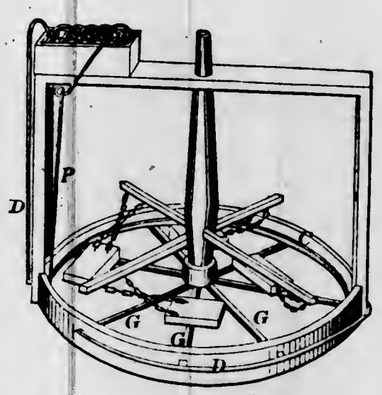
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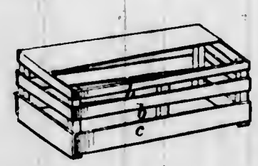
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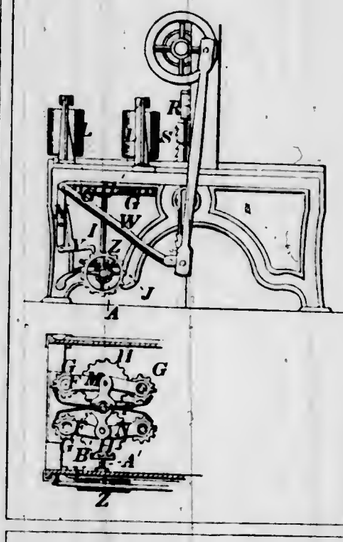
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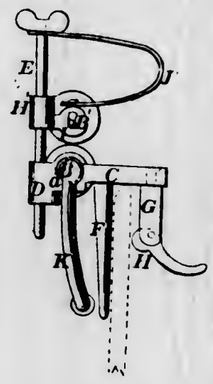
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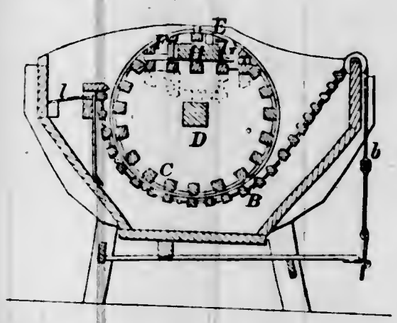
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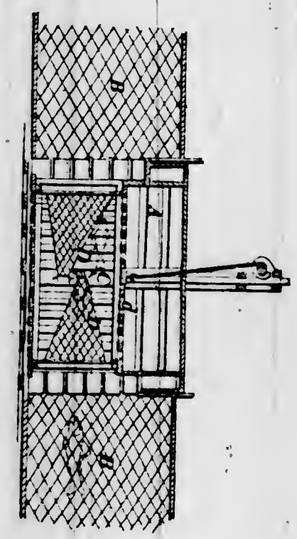
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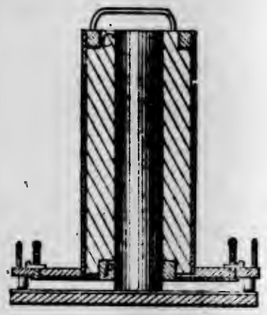
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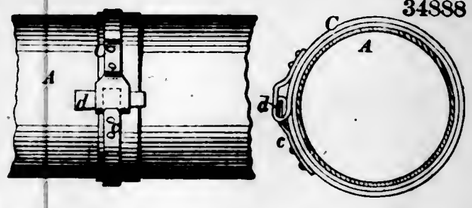
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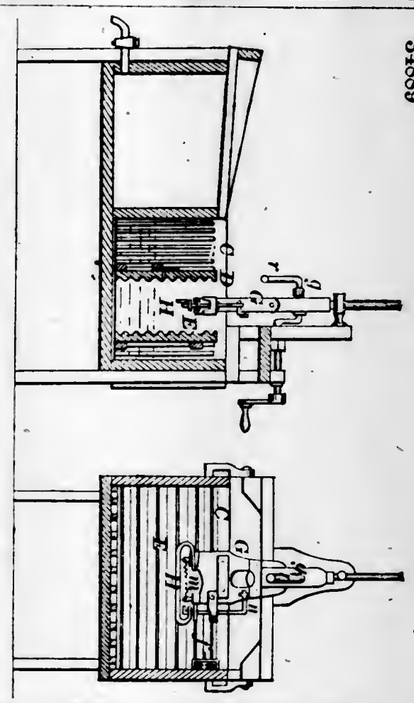
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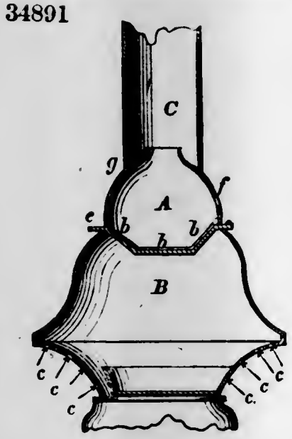
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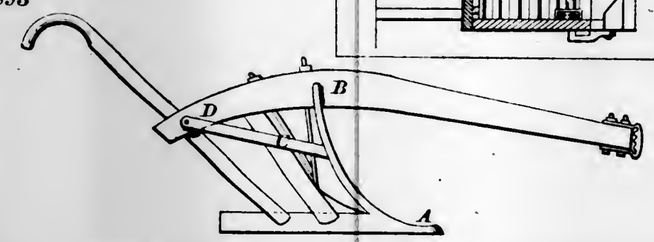
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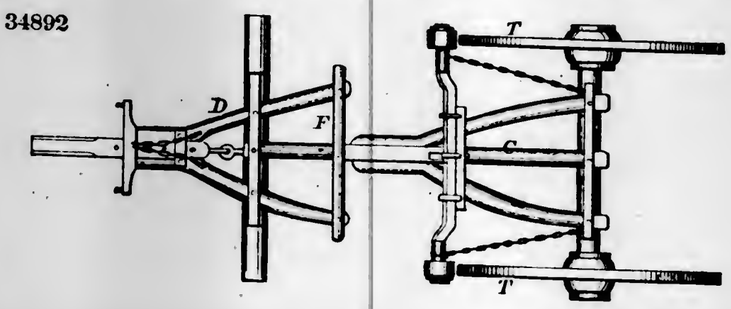
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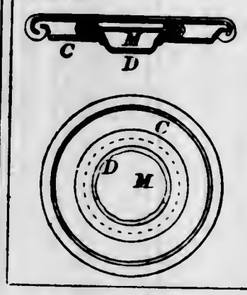
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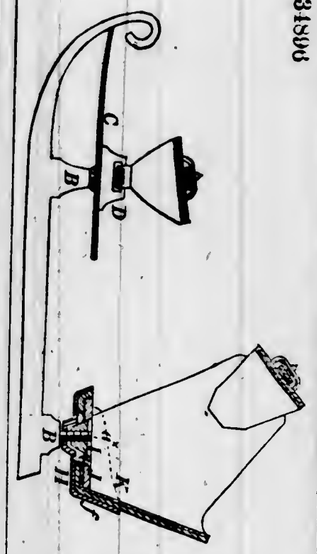
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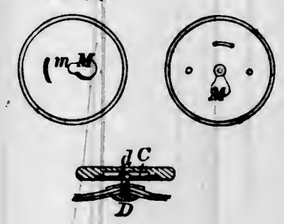
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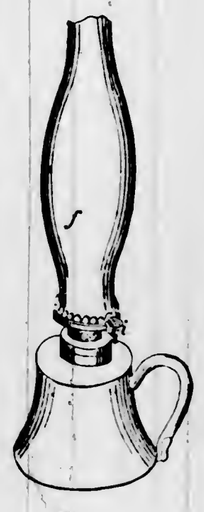
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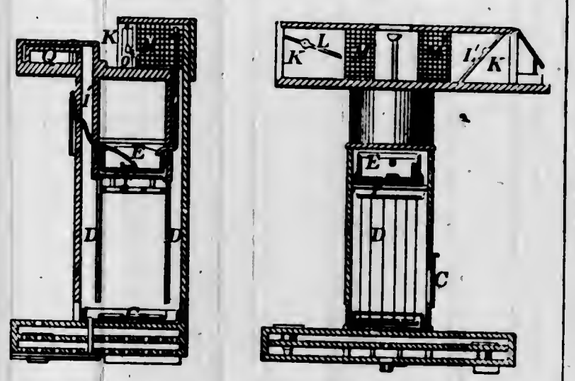
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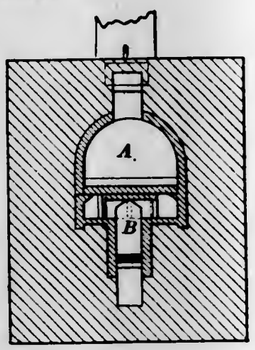
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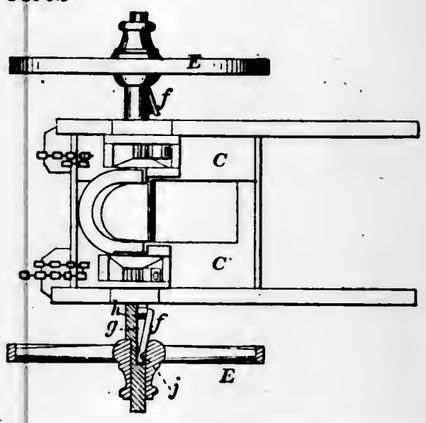
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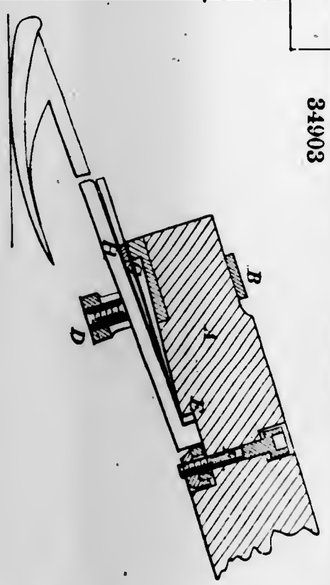
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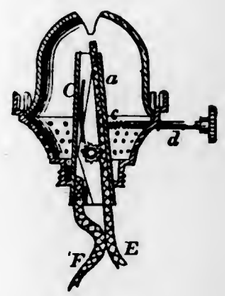
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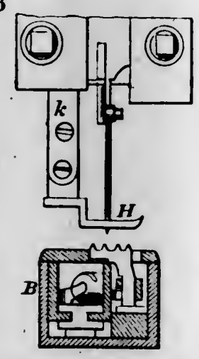
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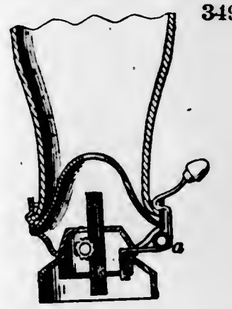
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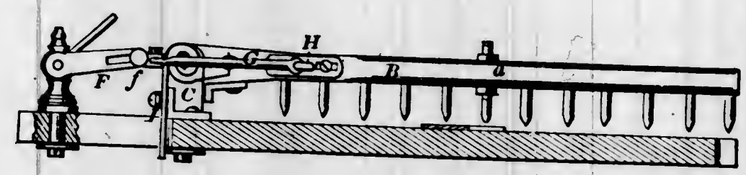
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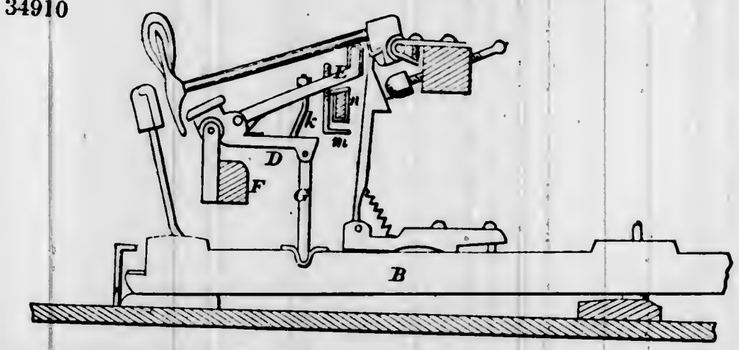
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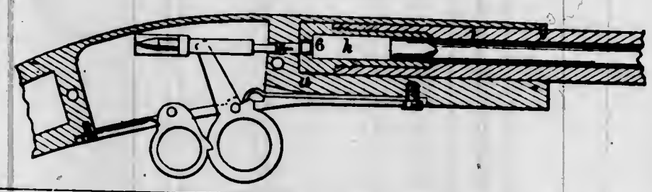
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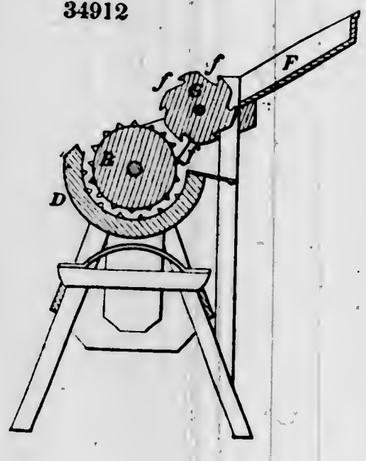
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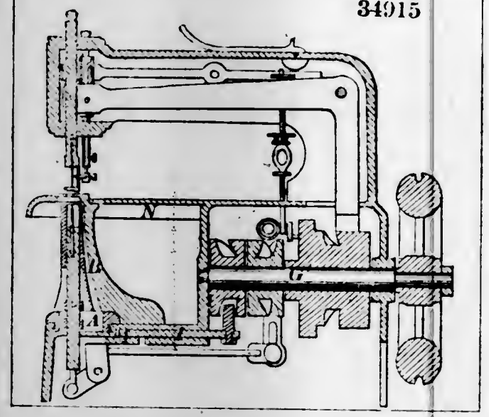
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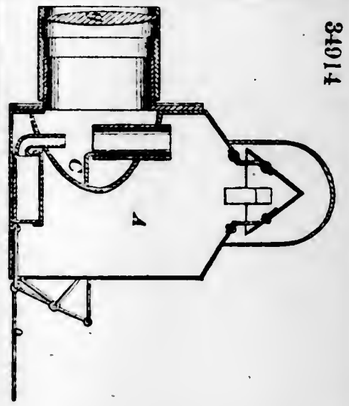
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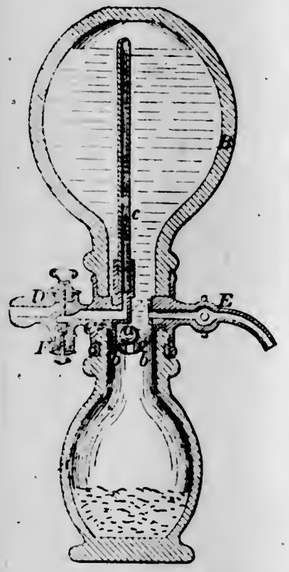
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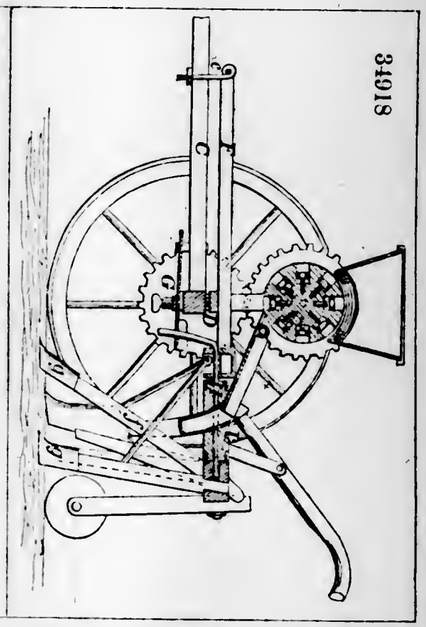
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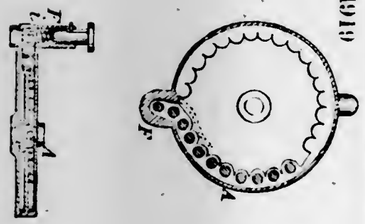
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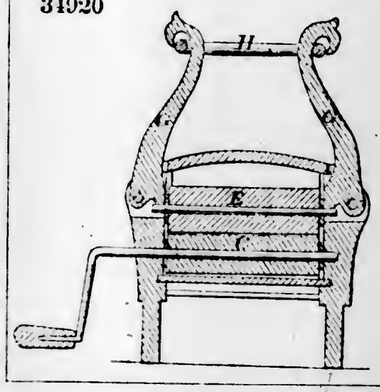
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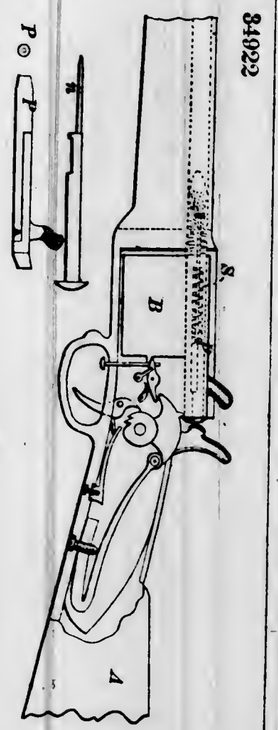
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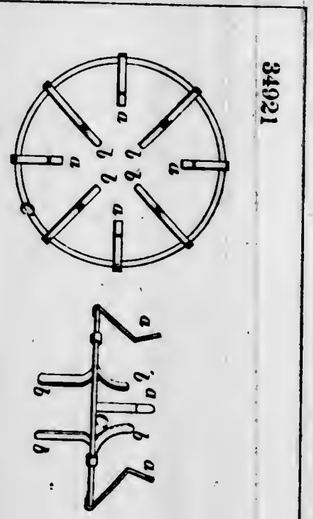
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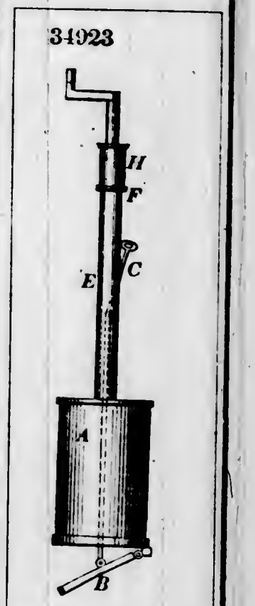
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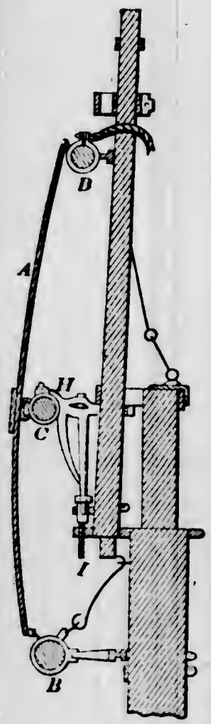
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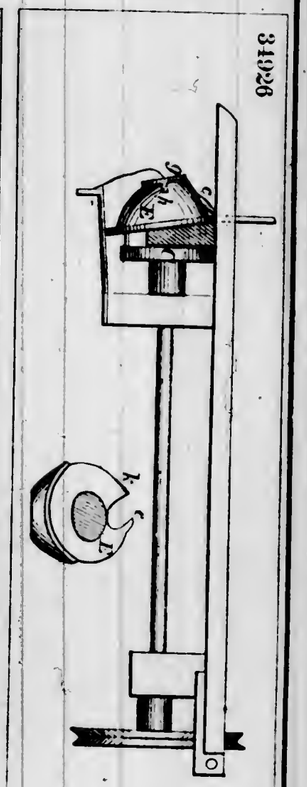
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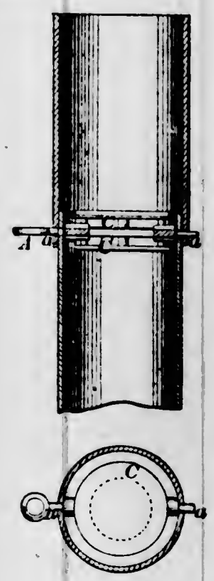
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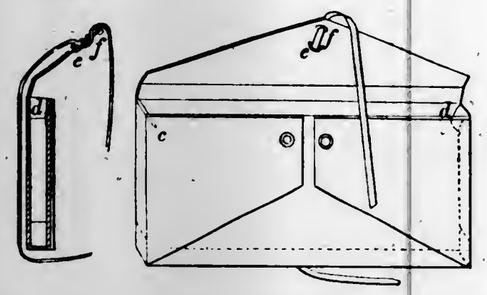
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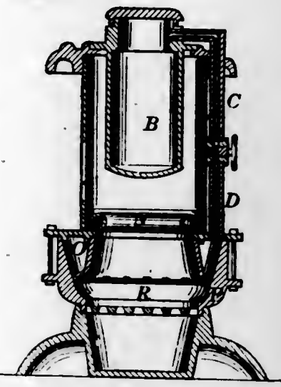
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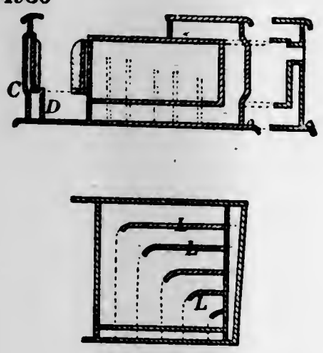
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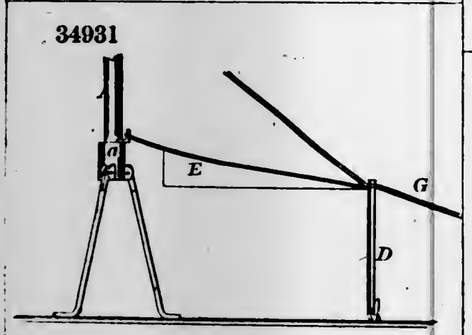
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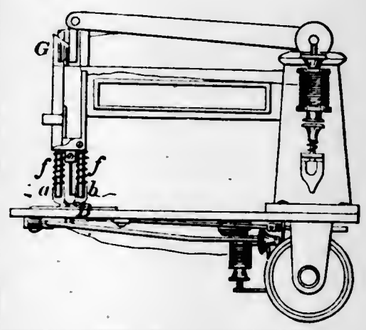
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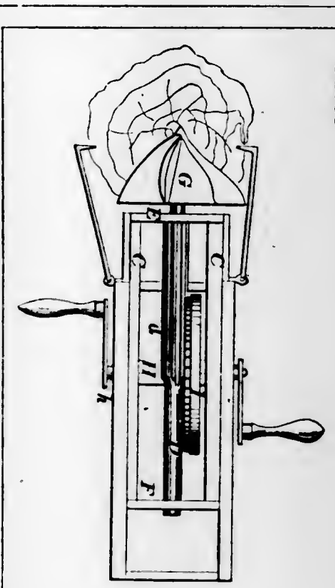
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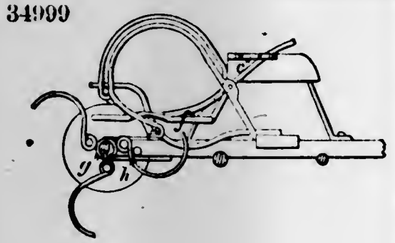
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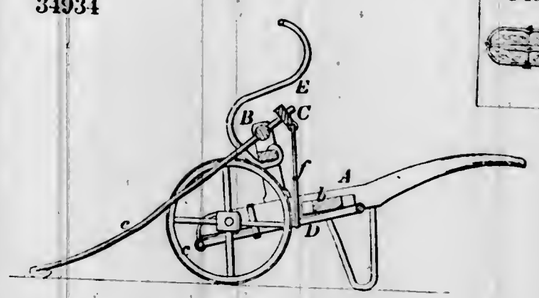
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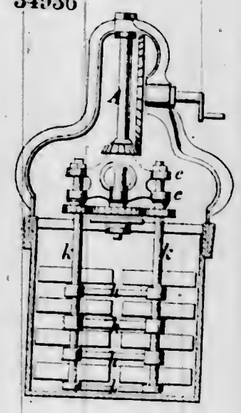
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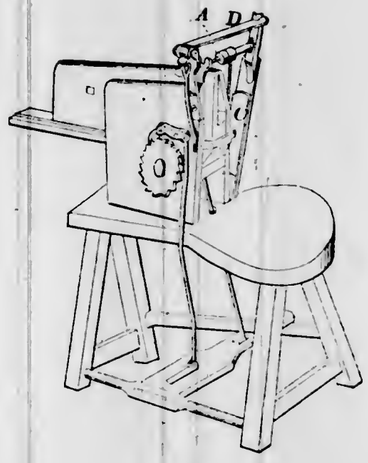
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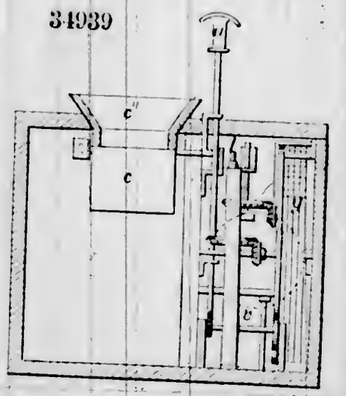
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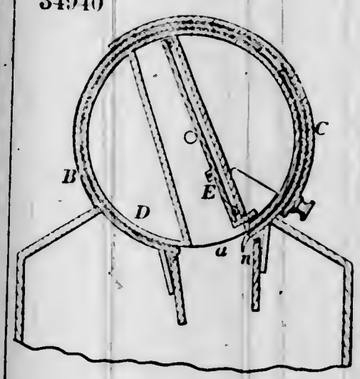
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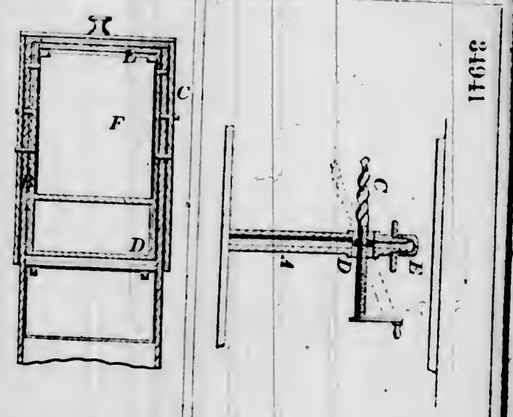
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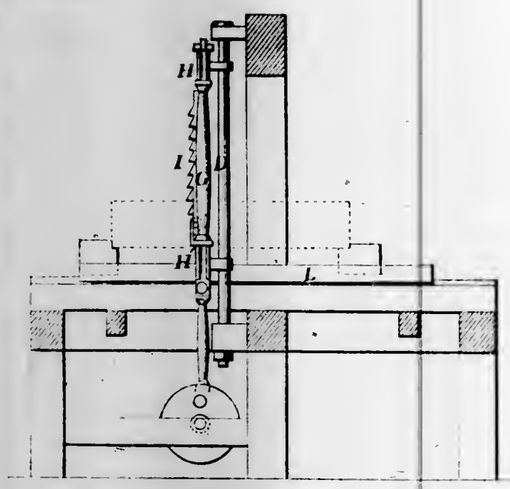


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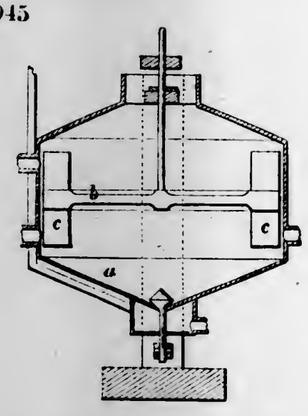
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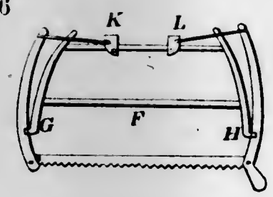
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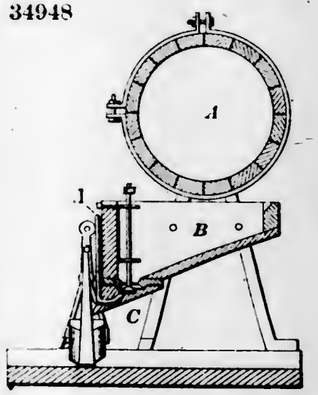
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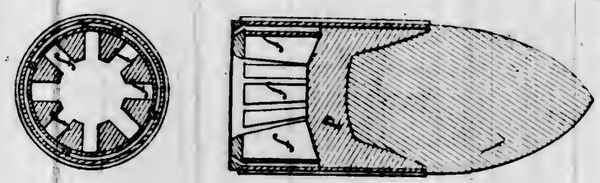
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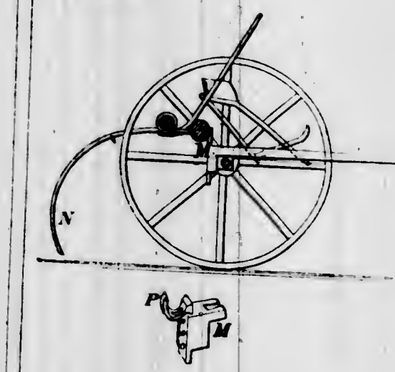
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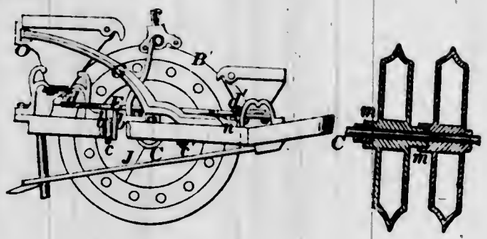
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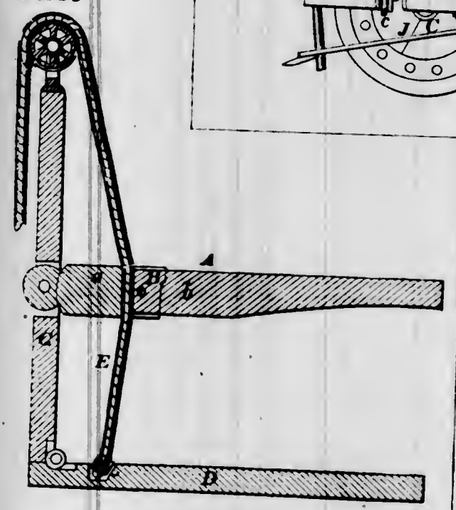
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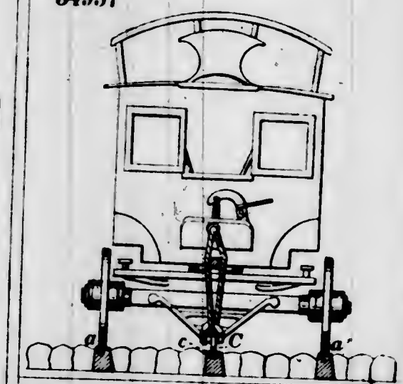
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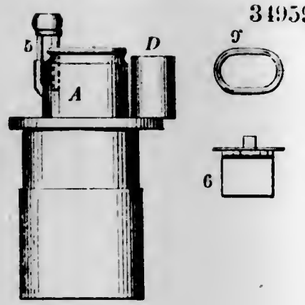
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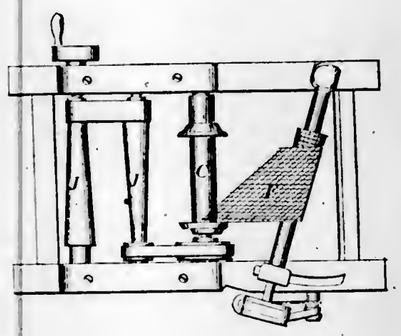
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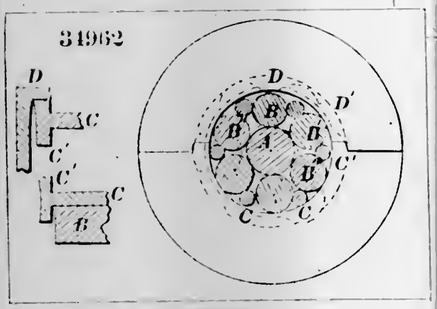
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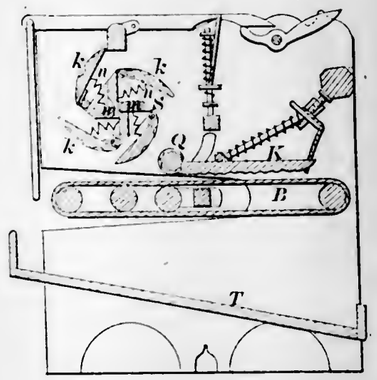
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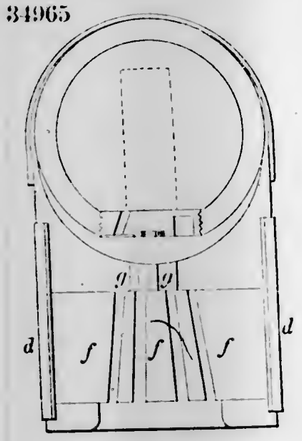
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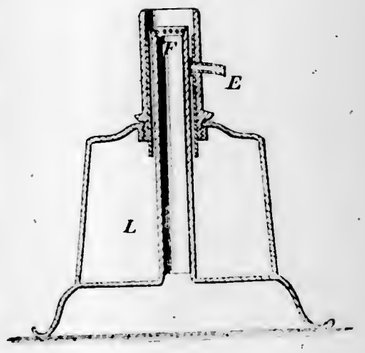
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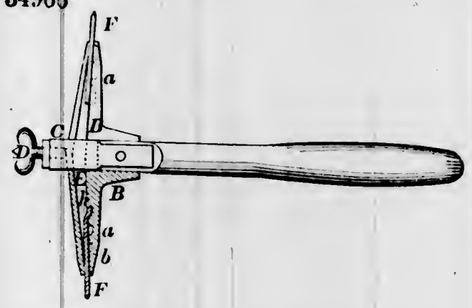
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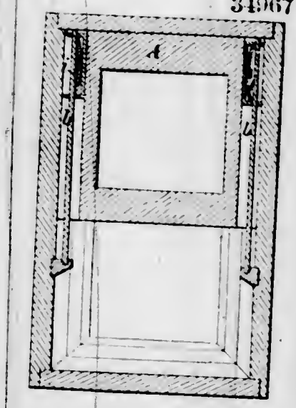
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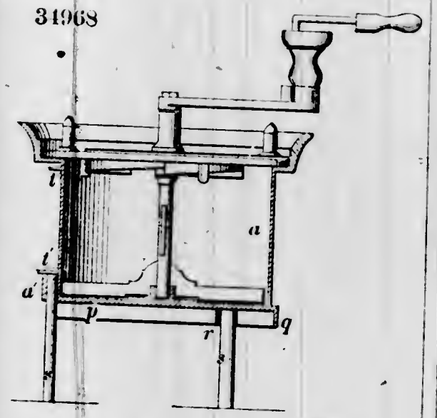
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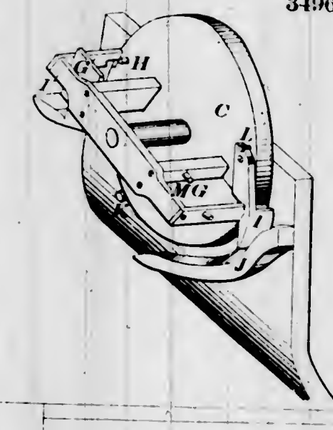
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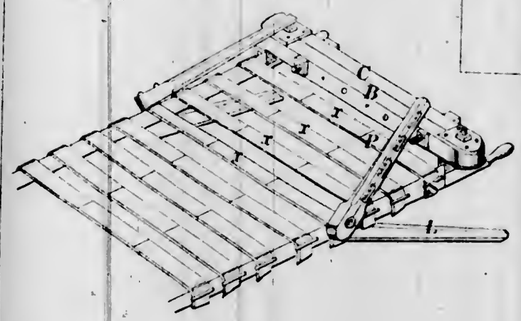
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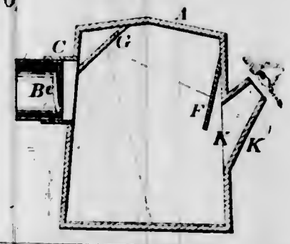
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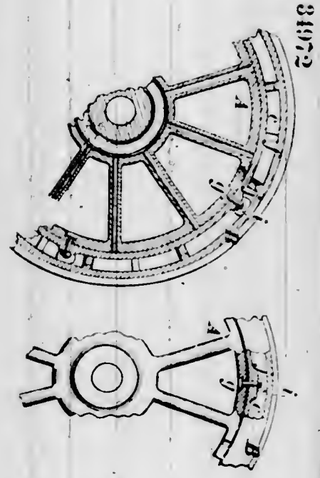
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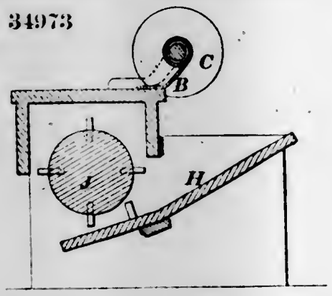
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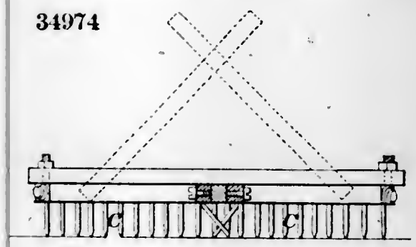
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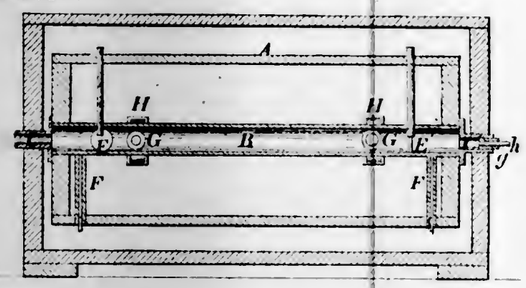
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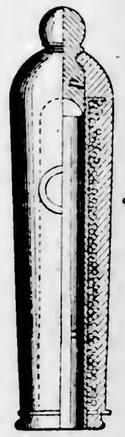
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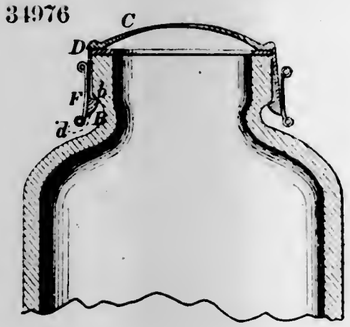
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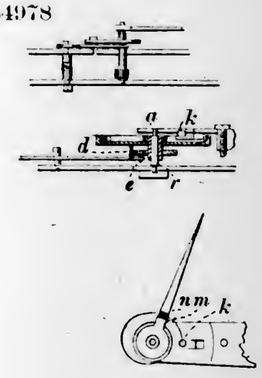
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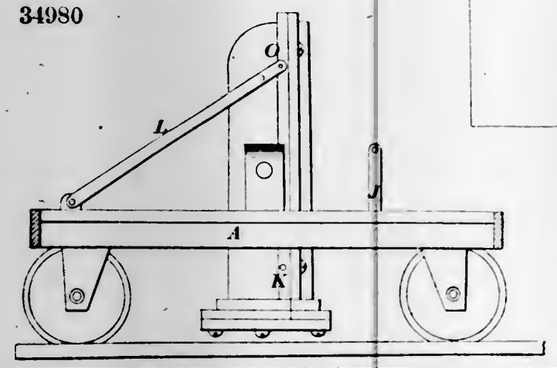
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Fig. 1

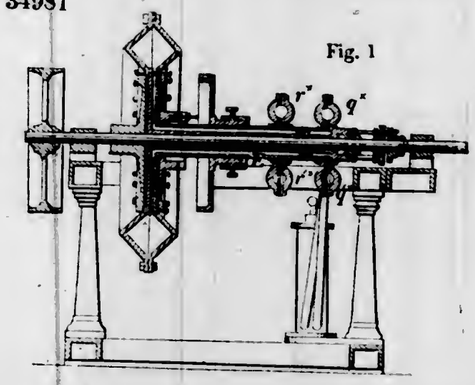
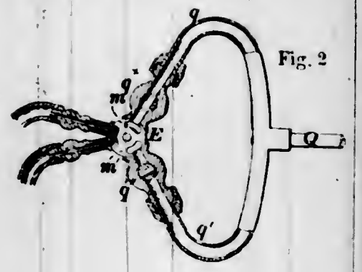
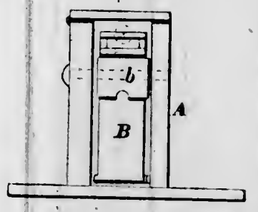
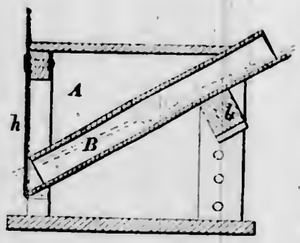


Fig. 2



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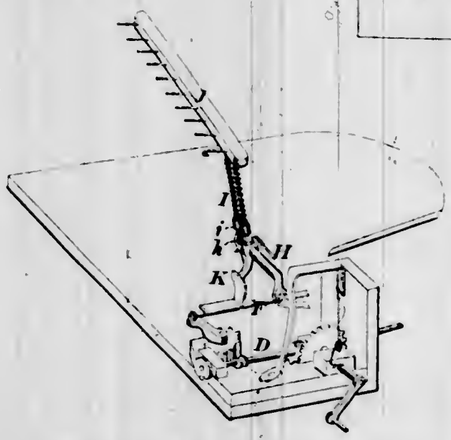
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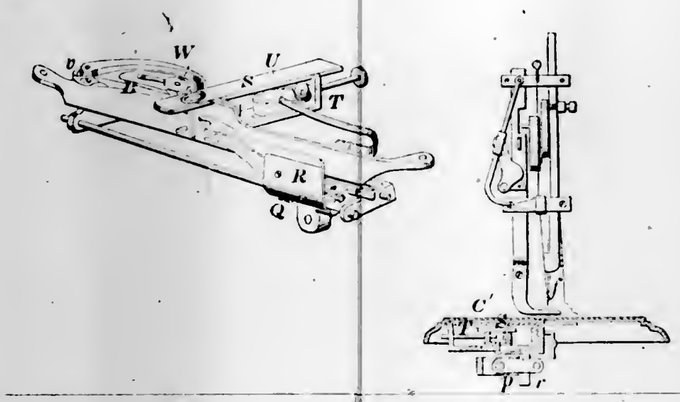
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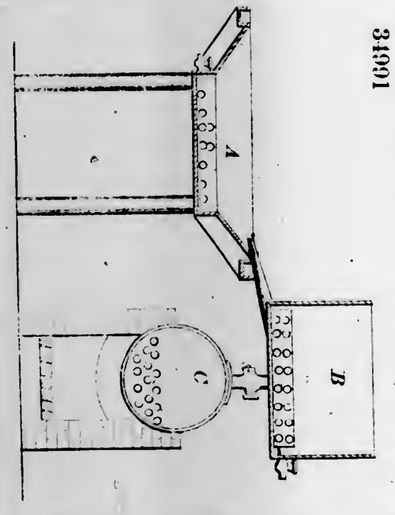
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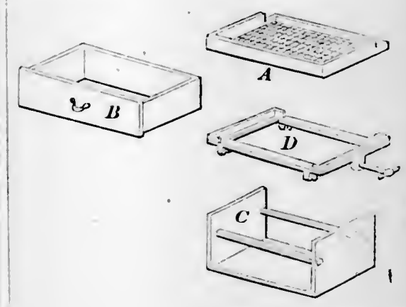
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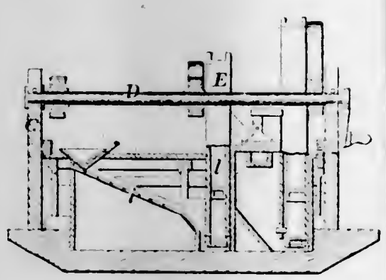
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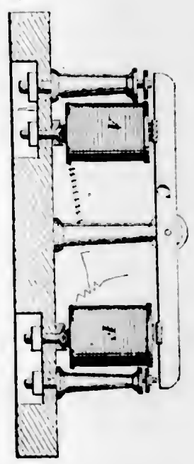
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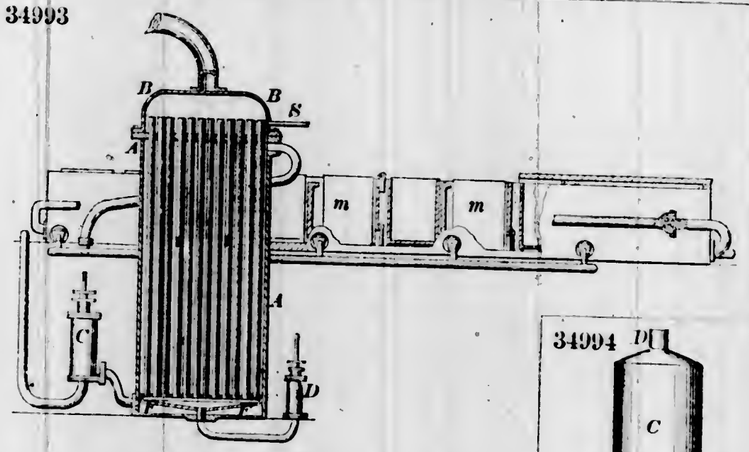
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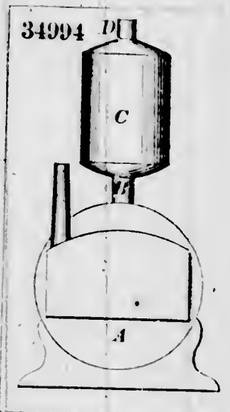
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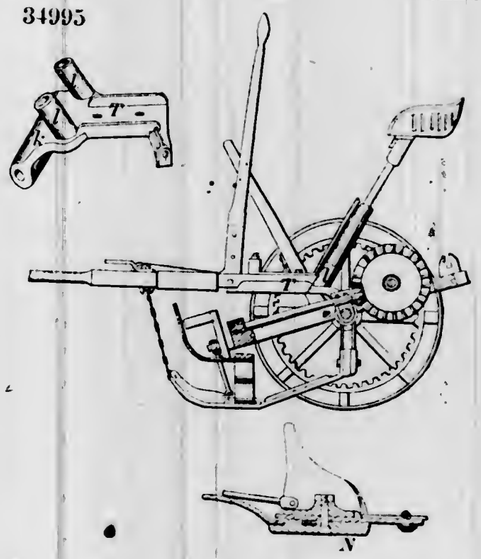
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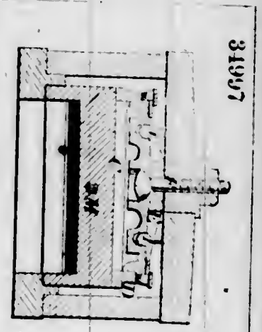
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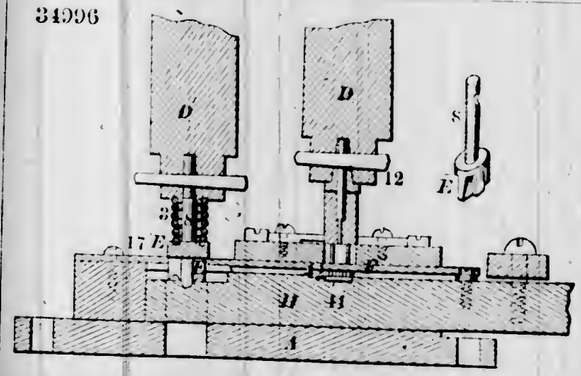
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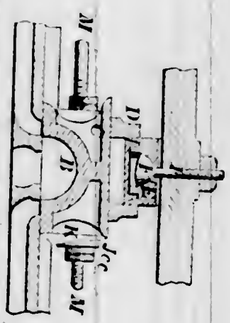


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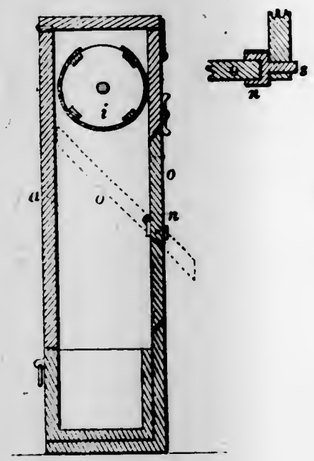


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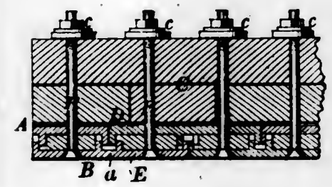




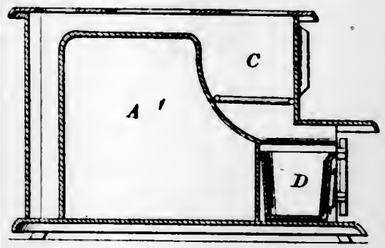
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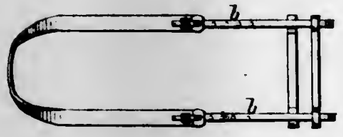


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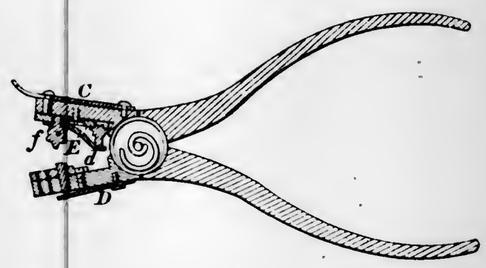


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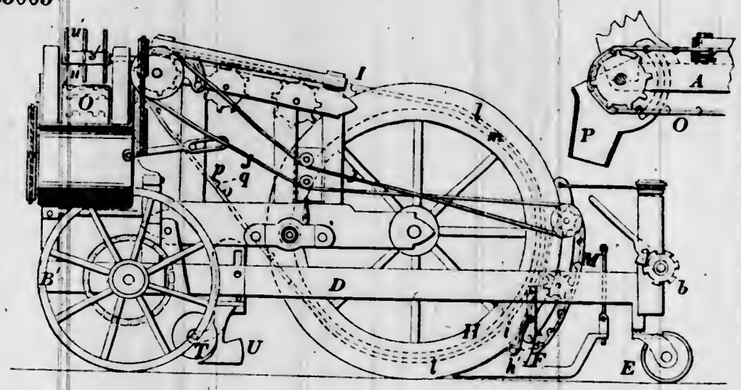
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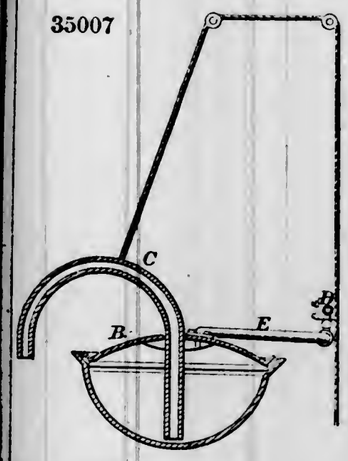
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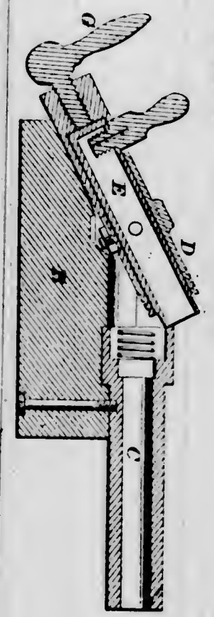
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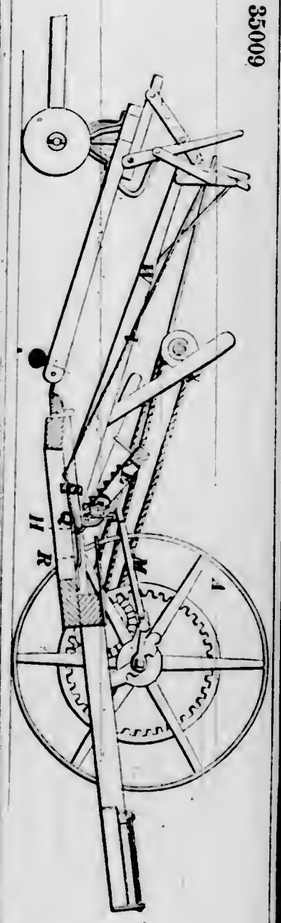
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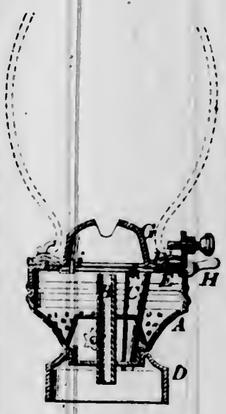
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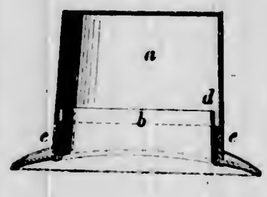
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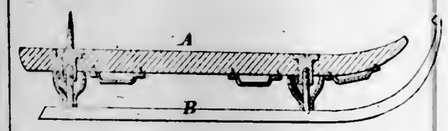
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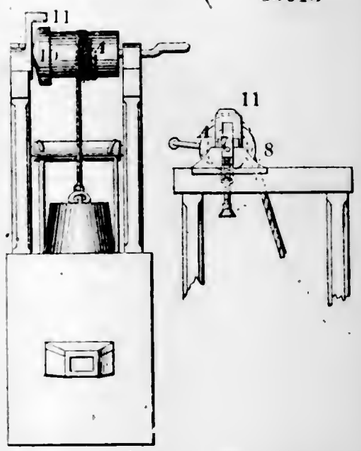
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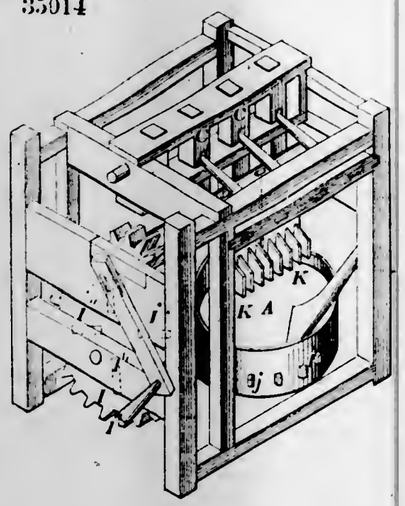
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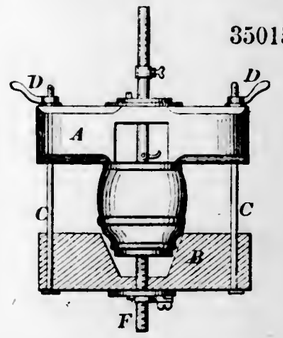
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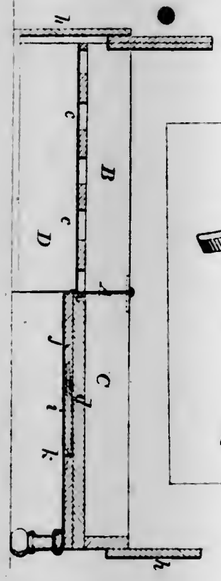
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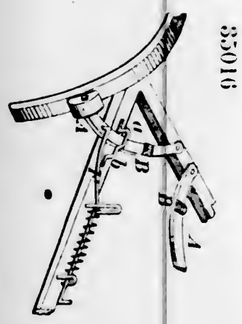
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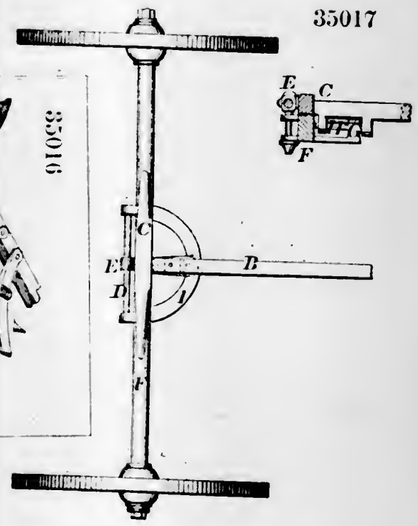
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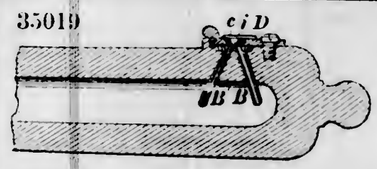
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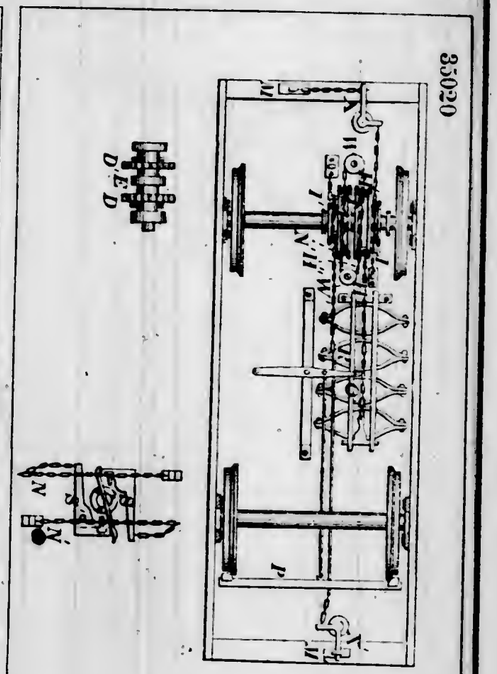
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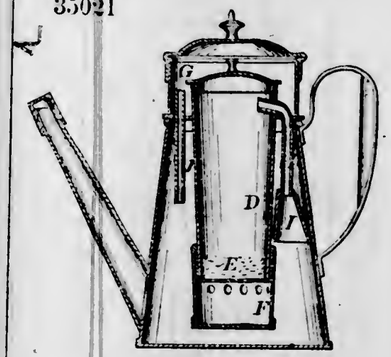
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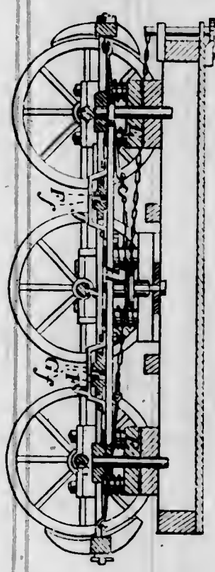
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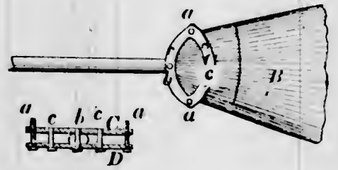
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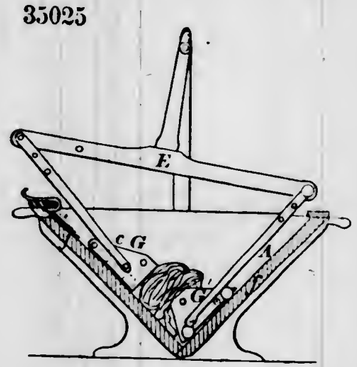
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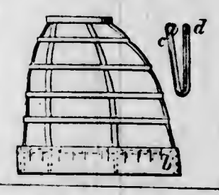
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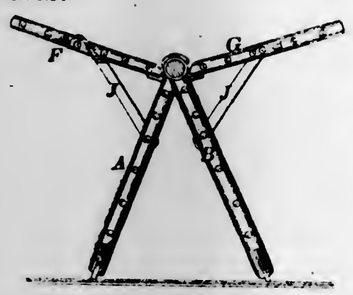
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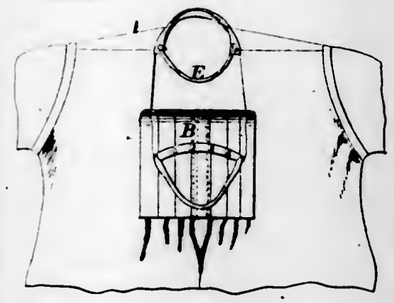
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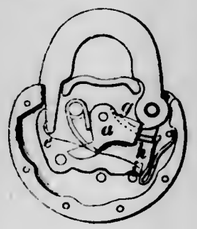
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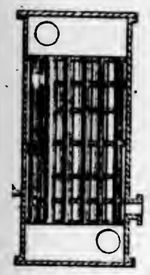
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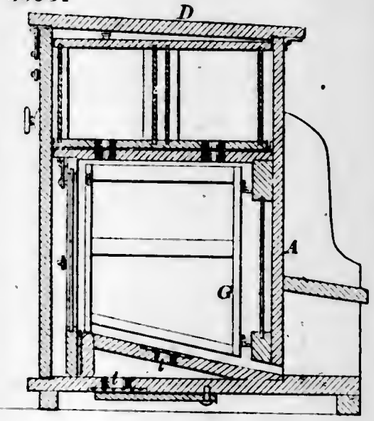
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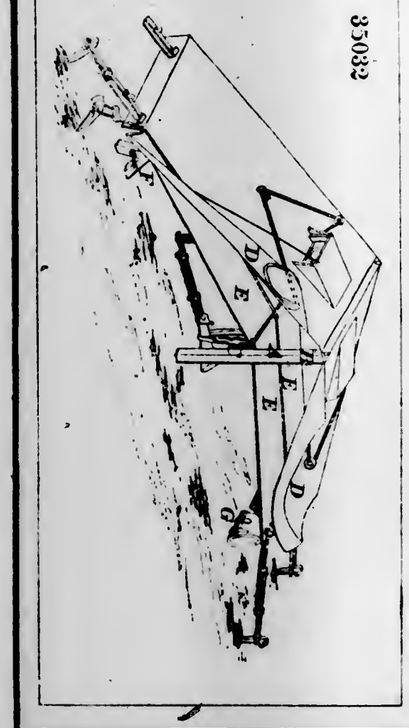
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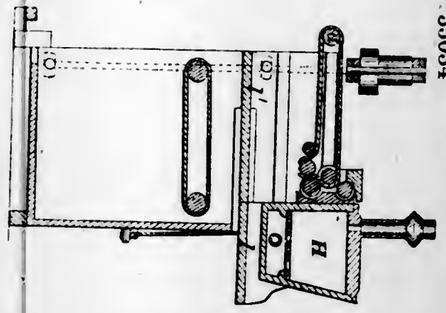
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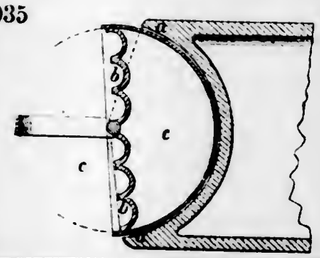
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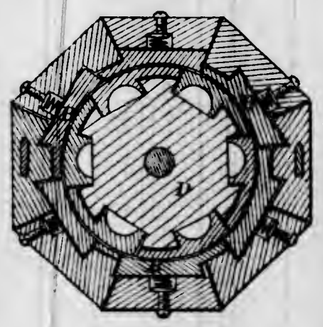
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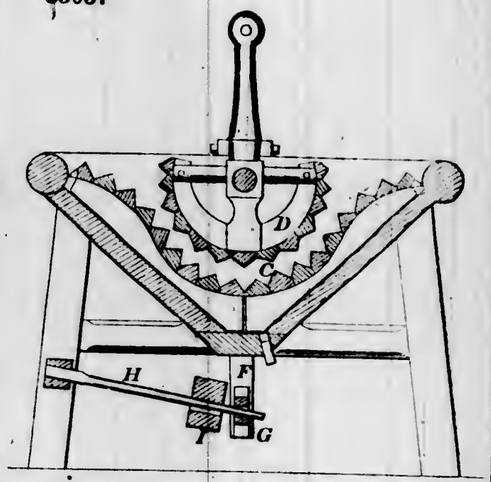
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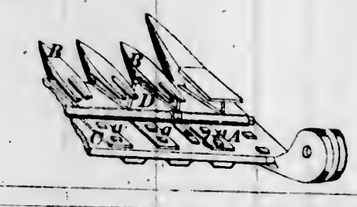
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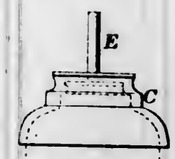
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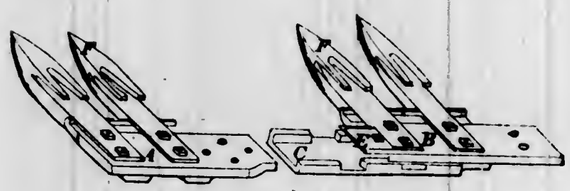
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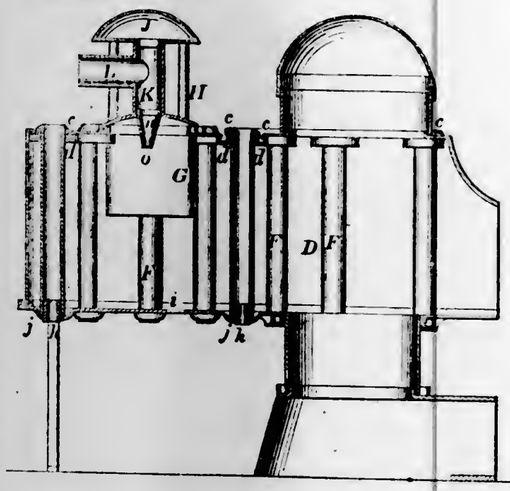
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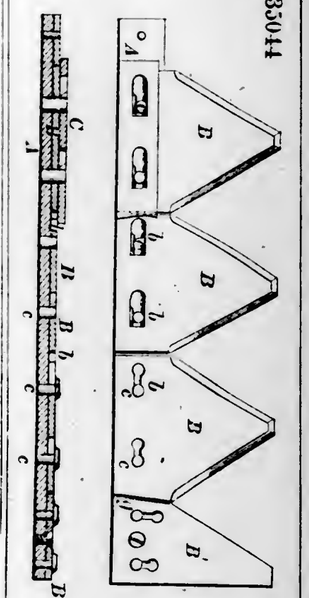
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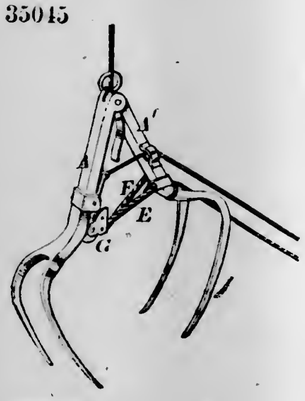
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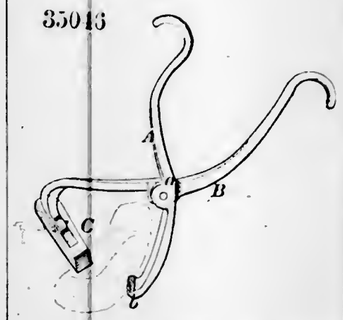
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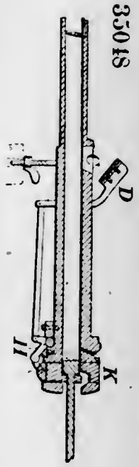
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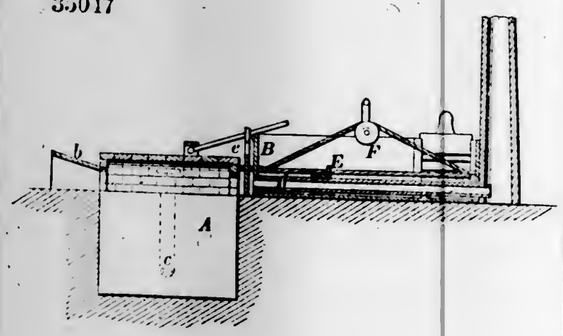
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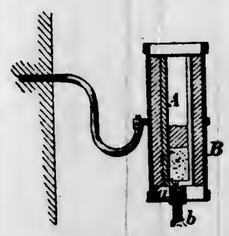
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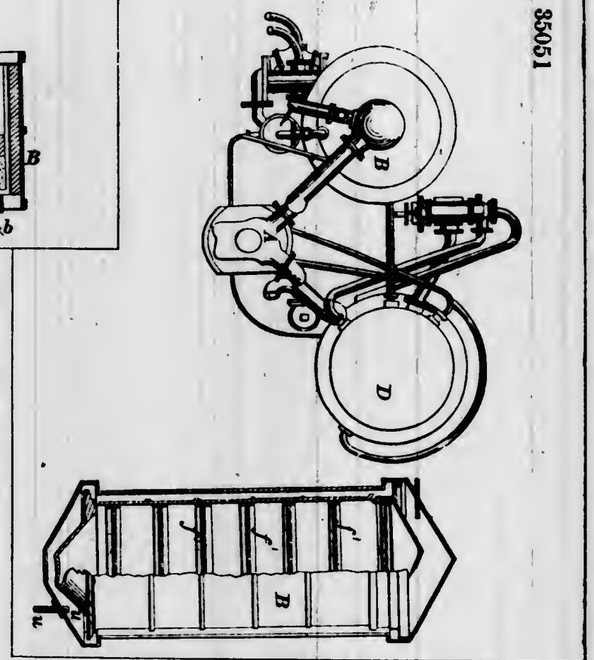
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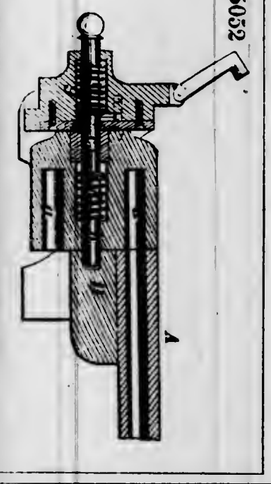
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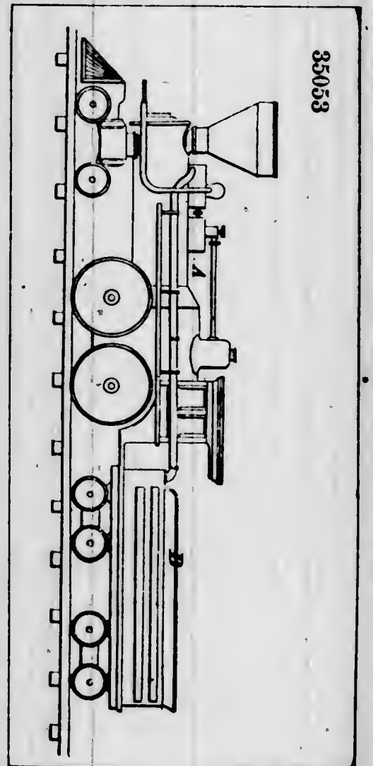
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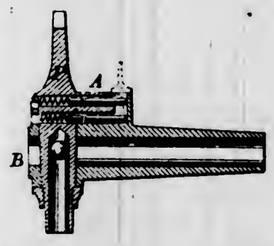
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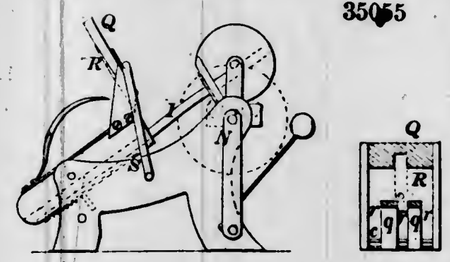
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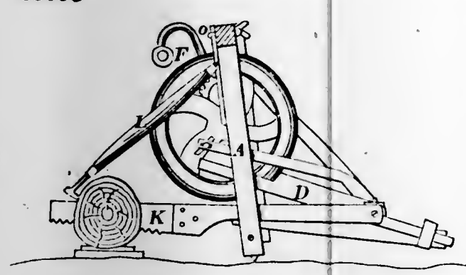
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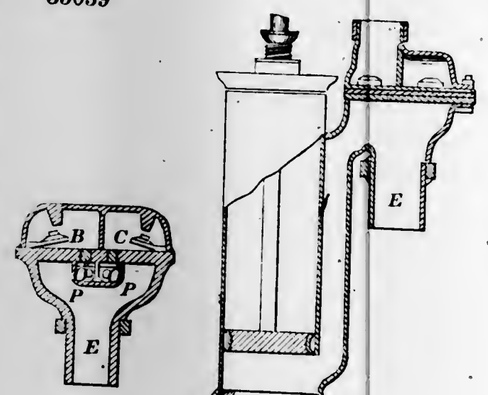
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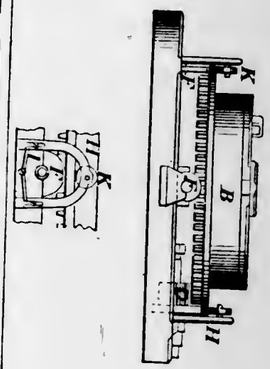
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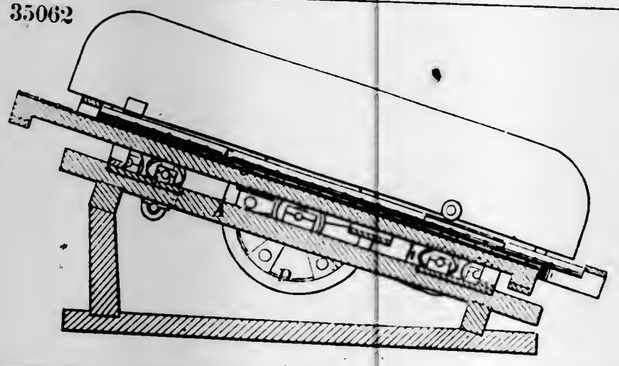
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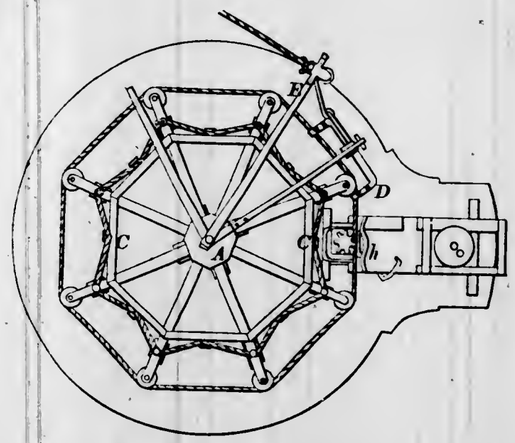
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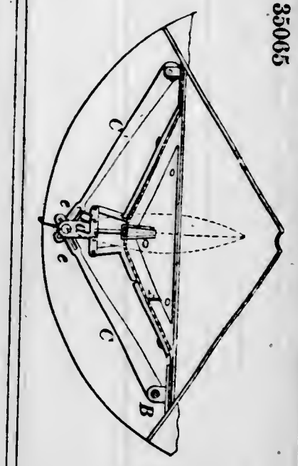
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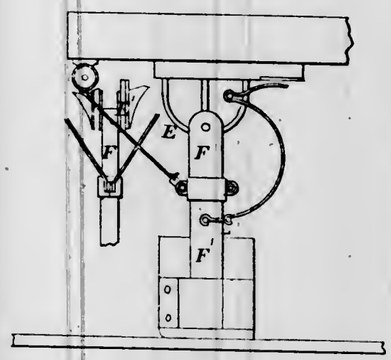
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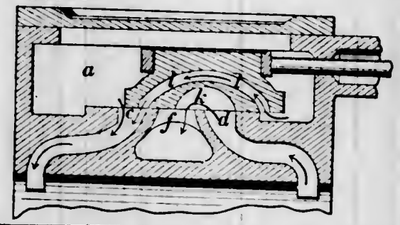
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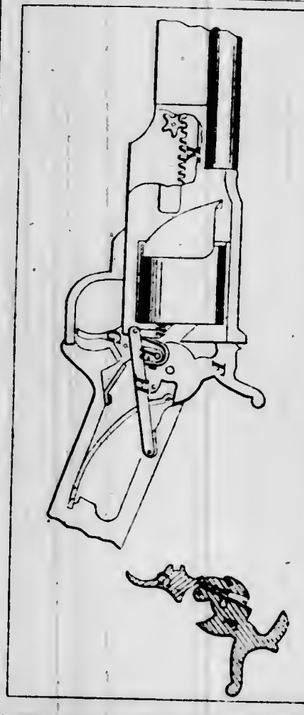
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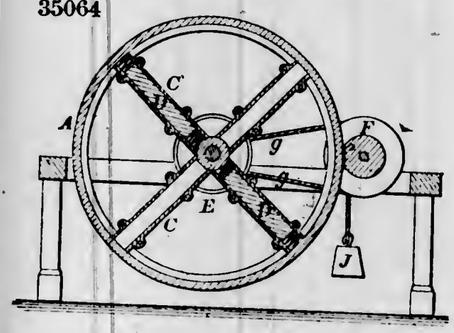
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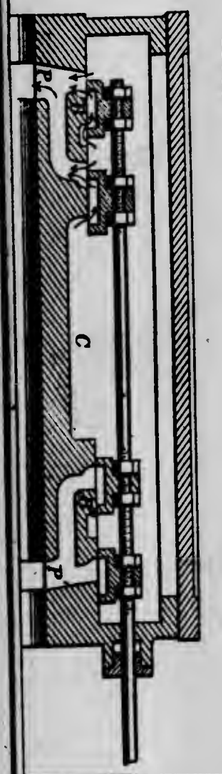
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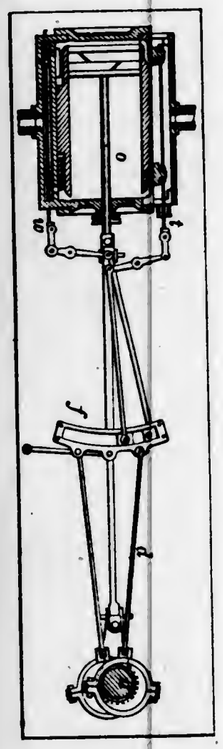
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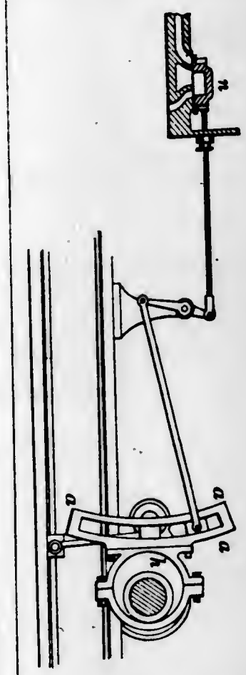
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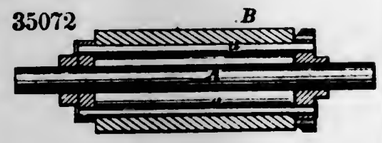
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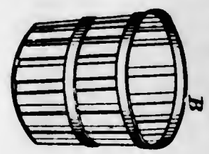
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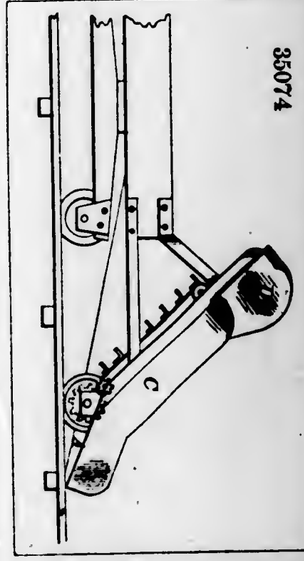
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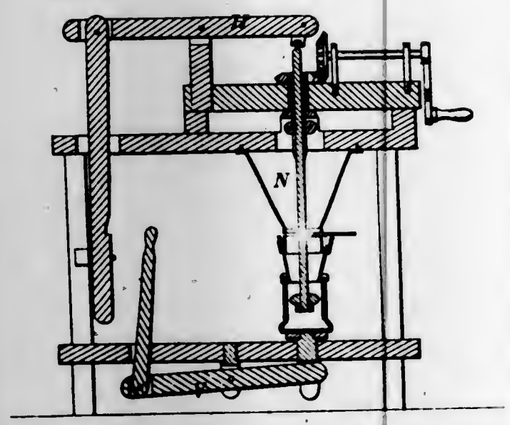
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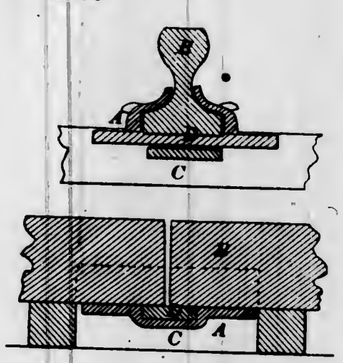
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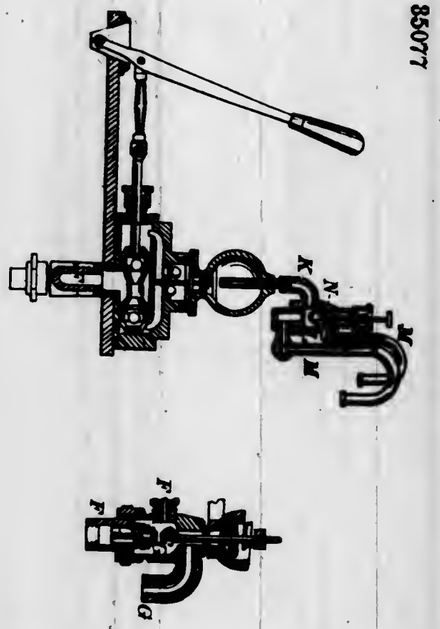
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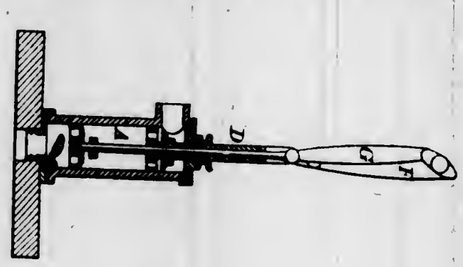
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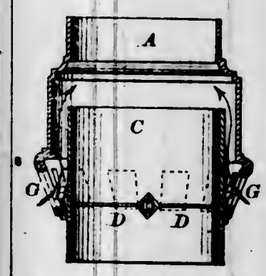
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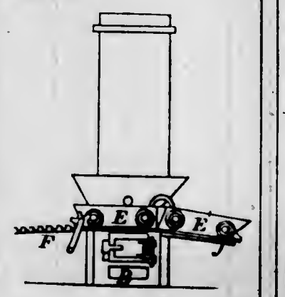
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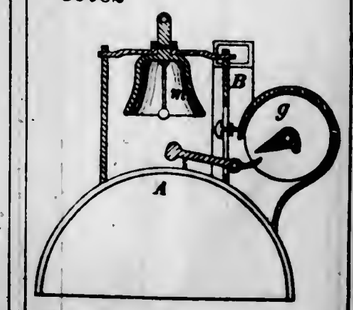
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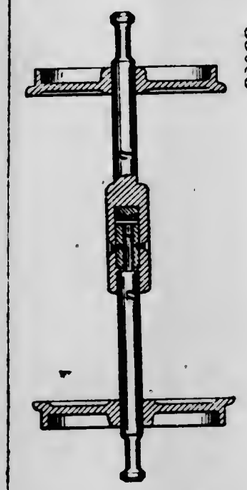


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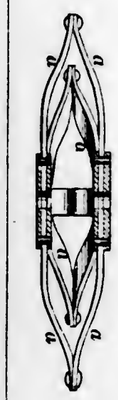


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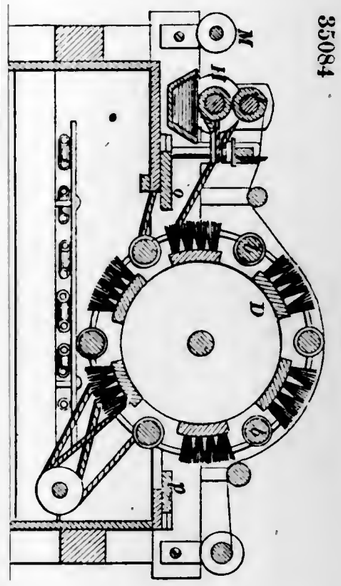
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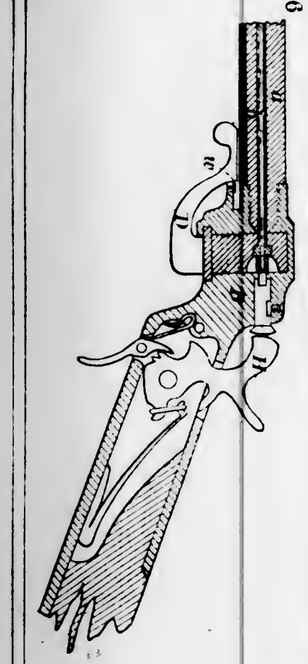
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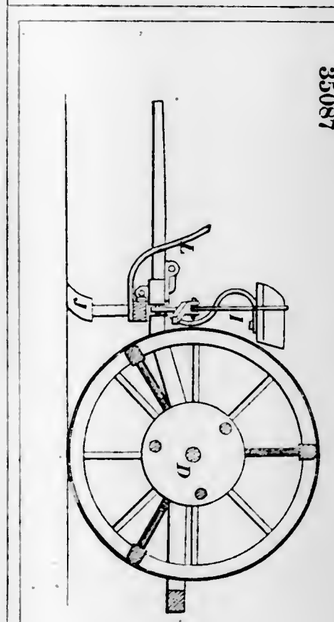
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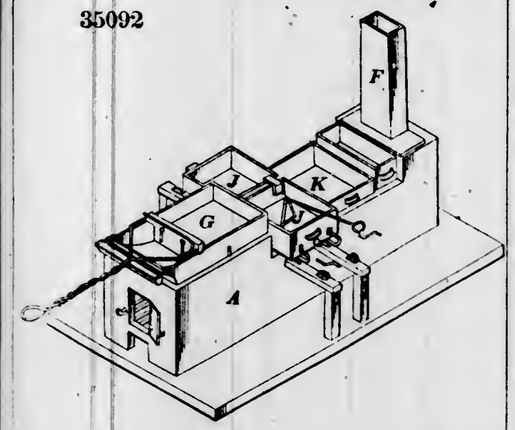
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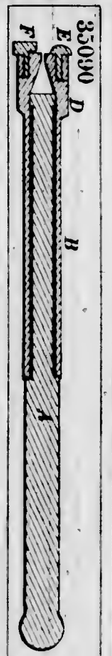
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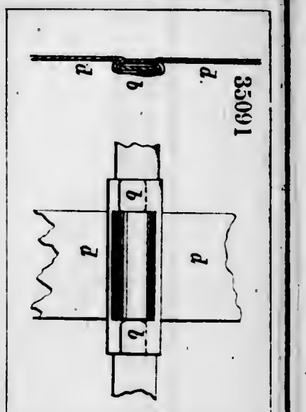
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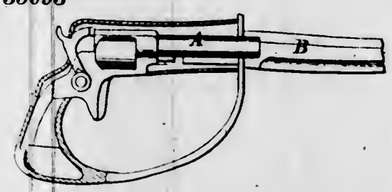
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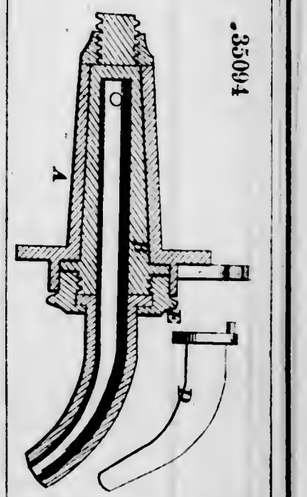
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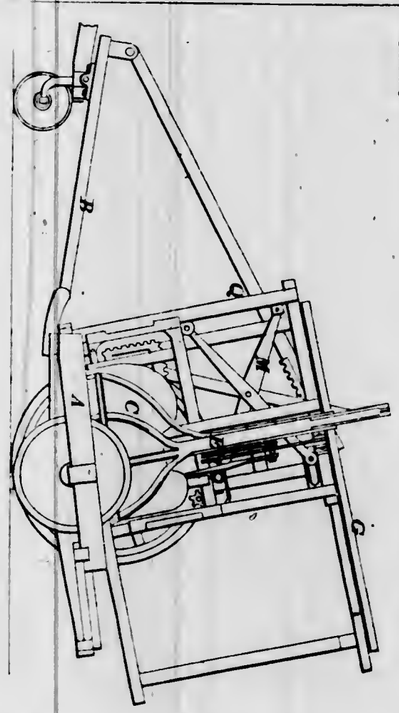
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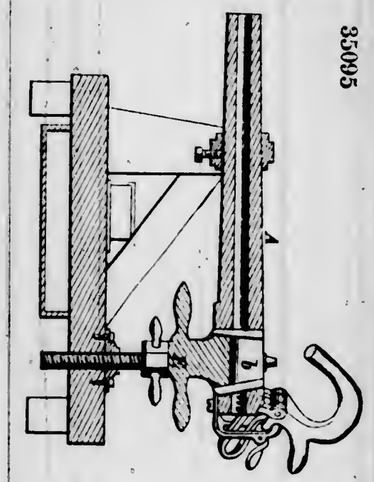
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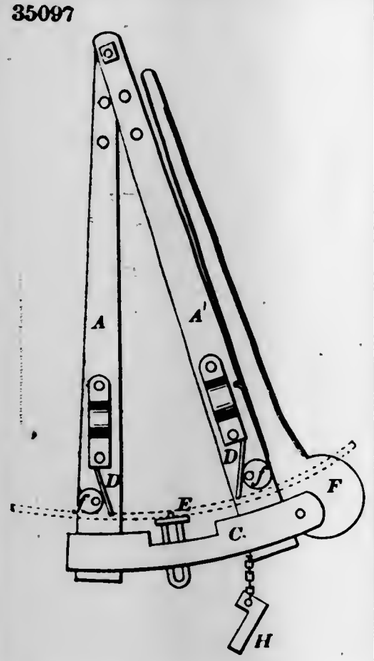
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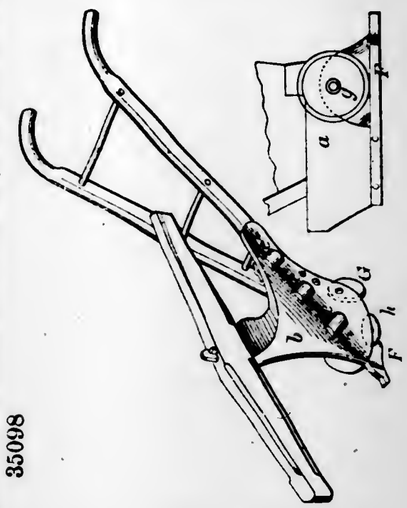
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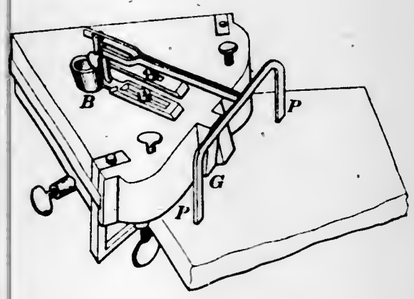
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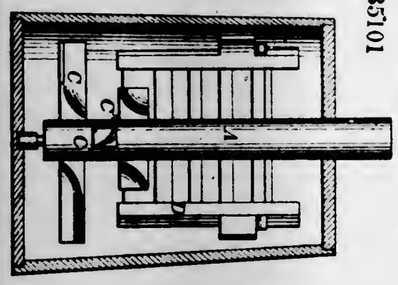
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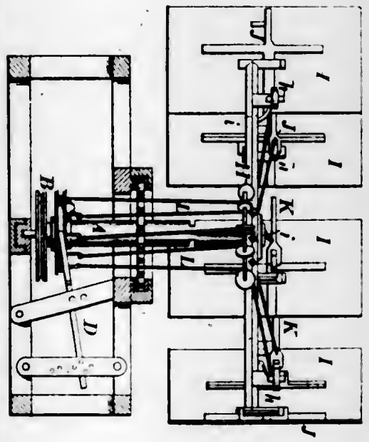
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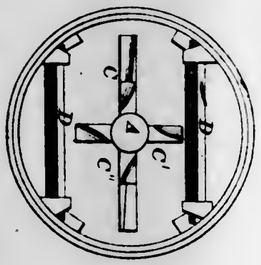


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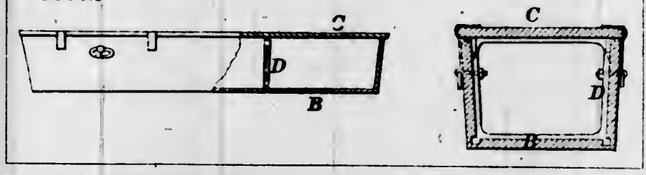


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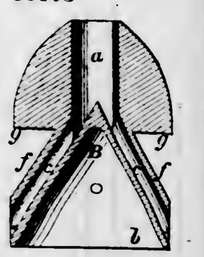




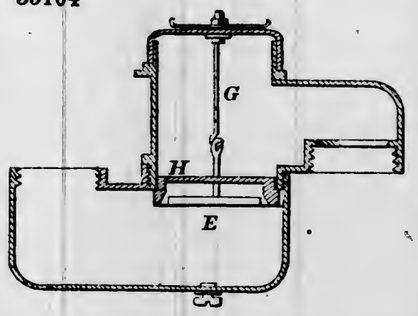
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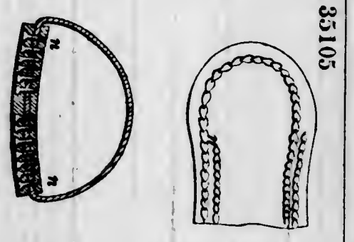
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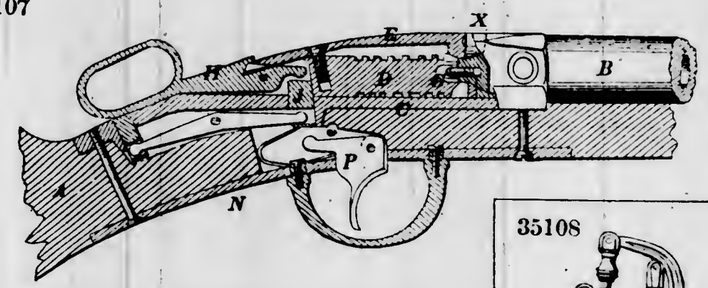
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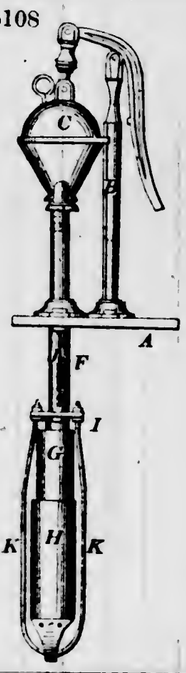
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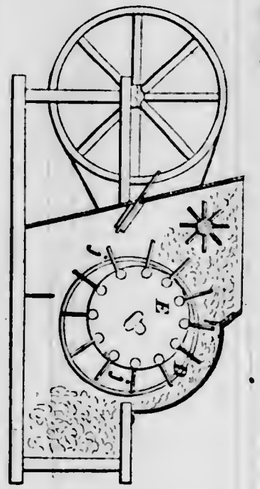
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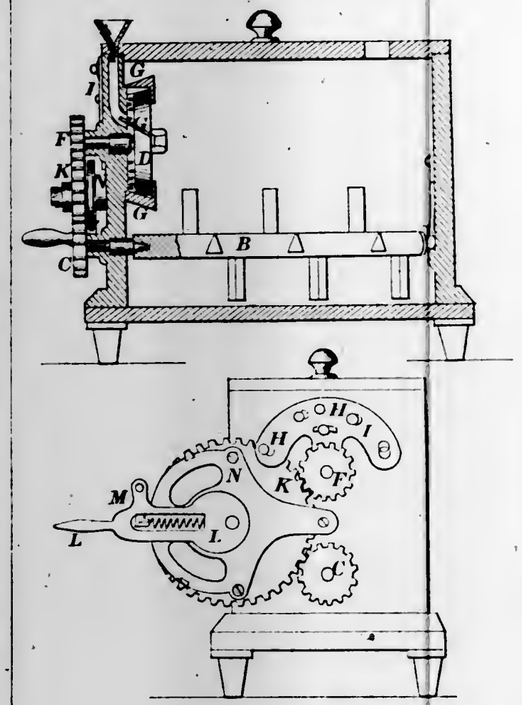
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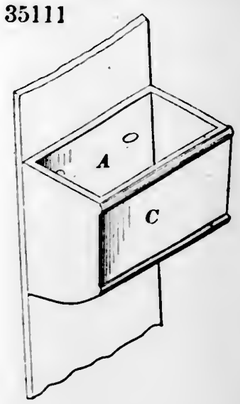
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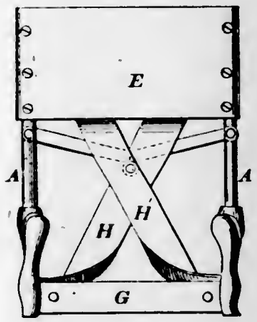
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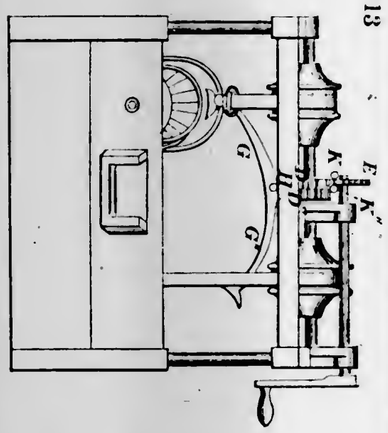
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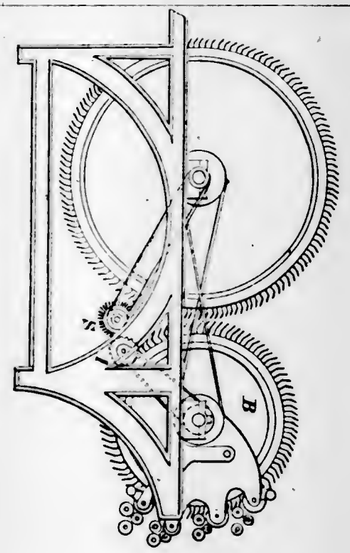
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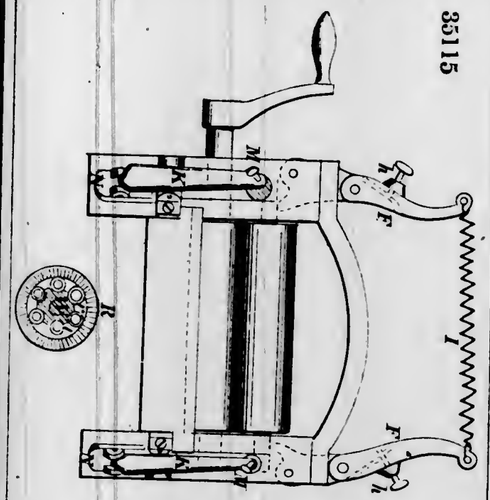
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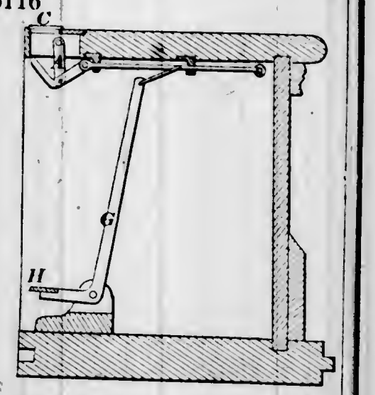
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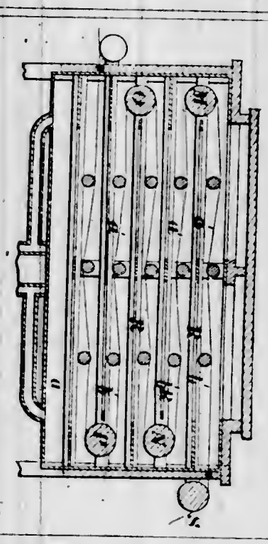
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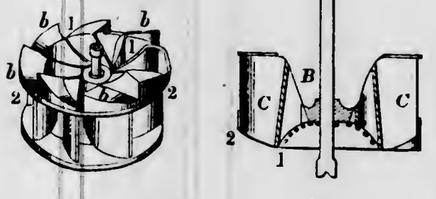
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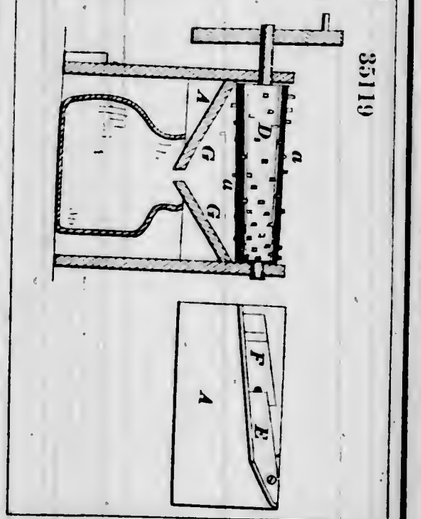
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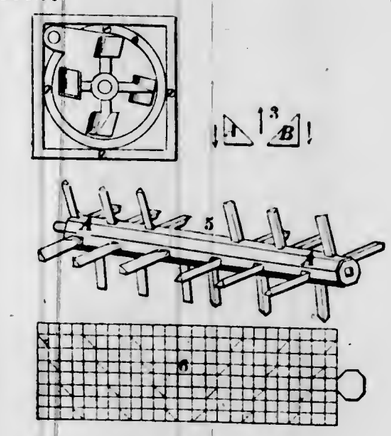
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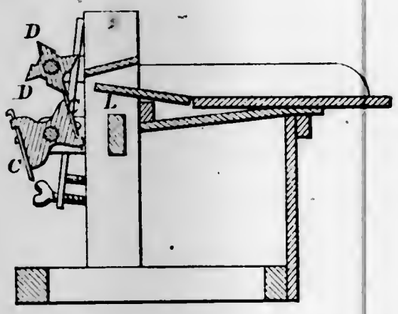
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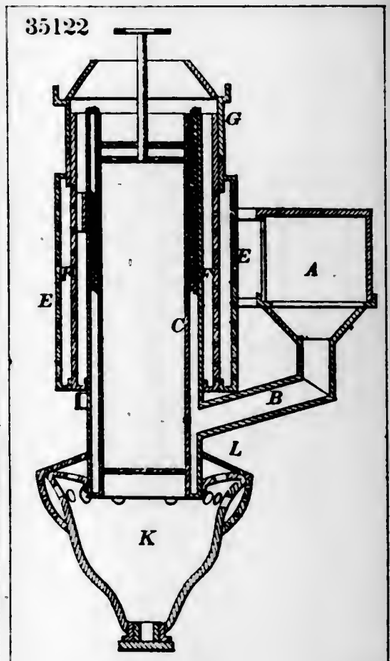
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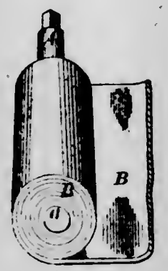
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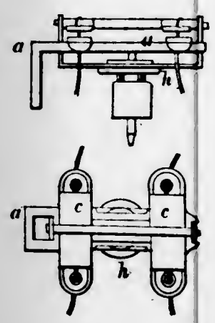
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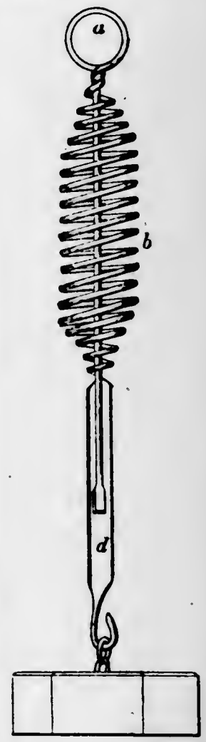
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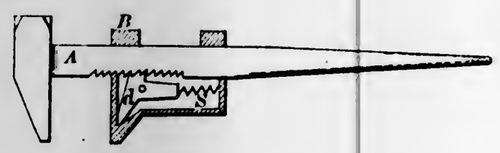
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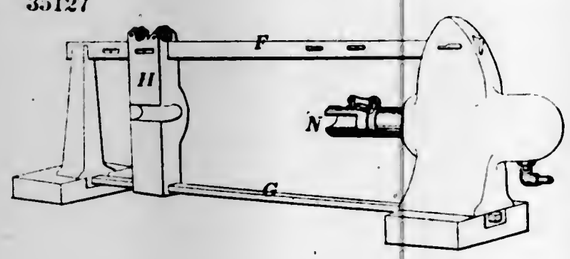
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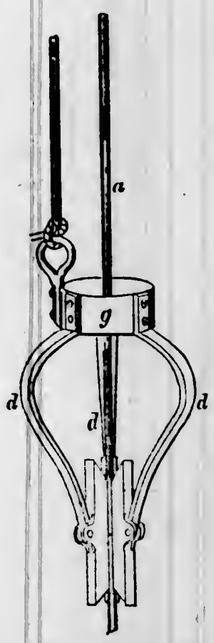
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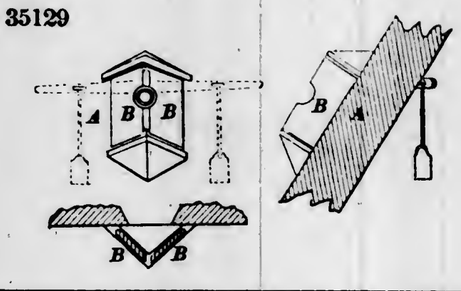
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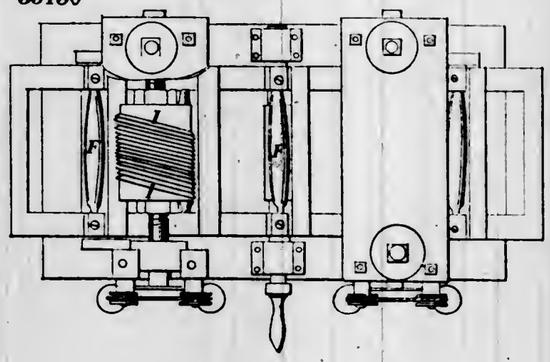
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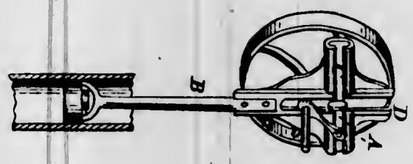
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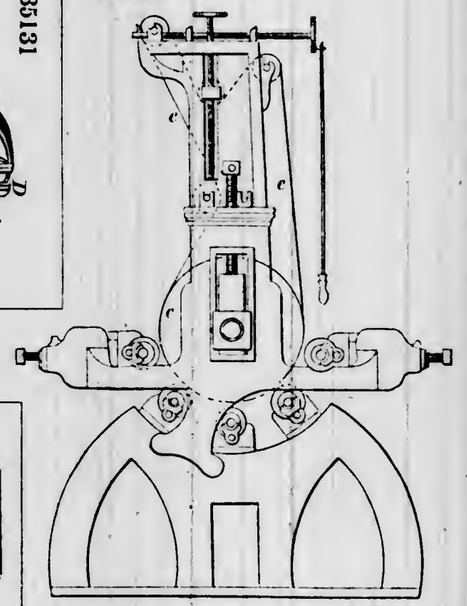
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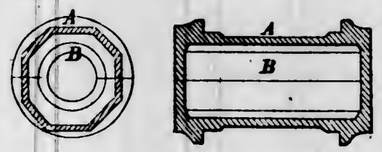
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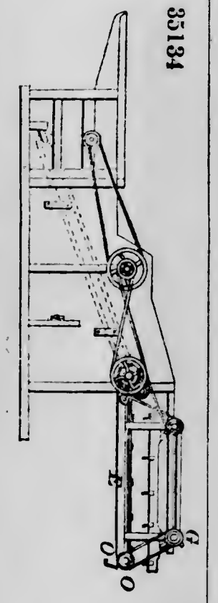


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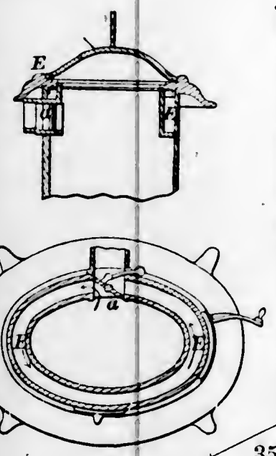


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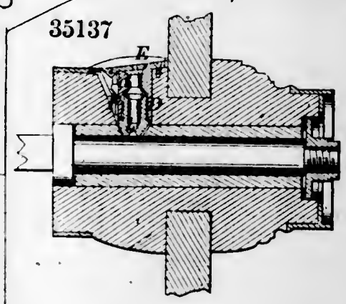


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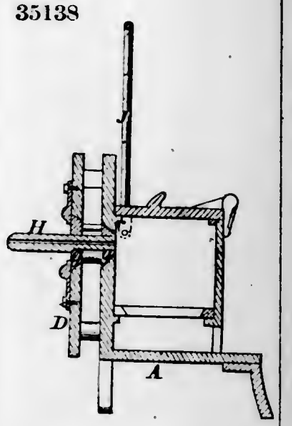


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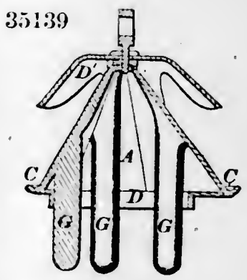
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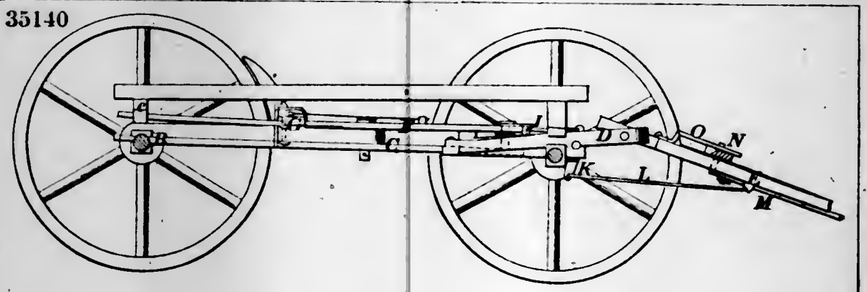
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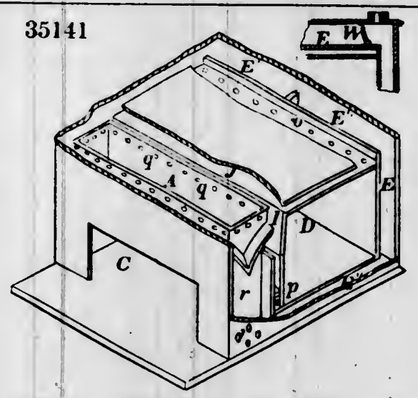
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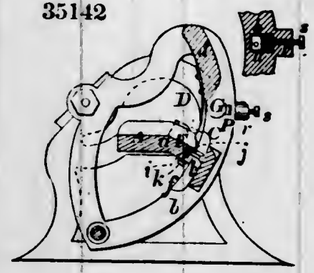
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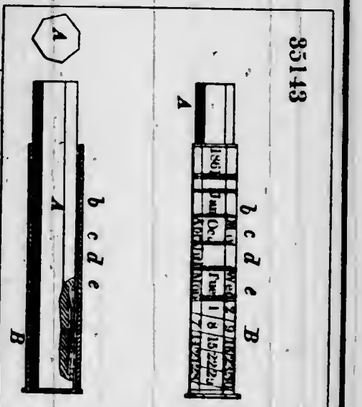
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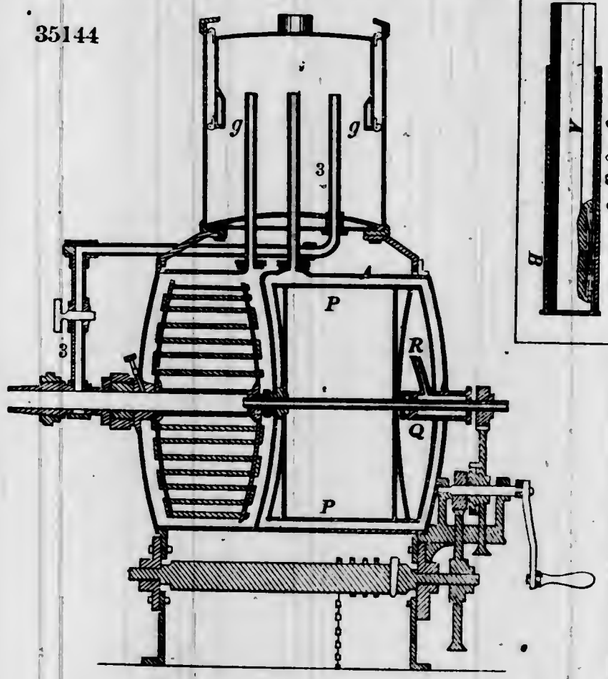
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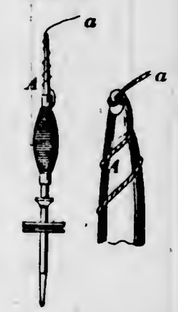
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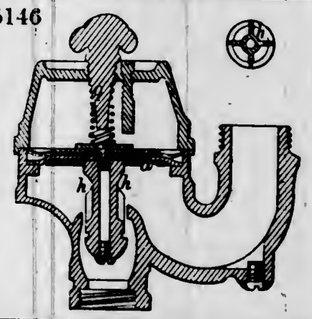
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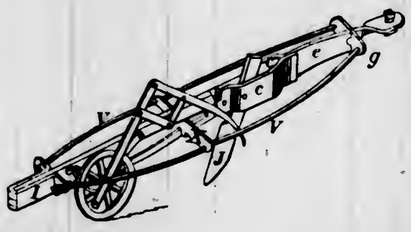
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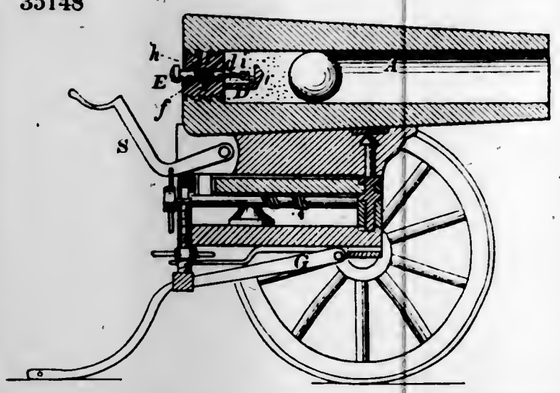


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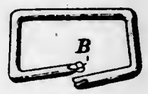
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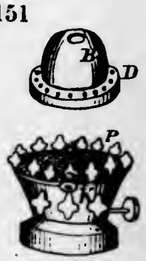
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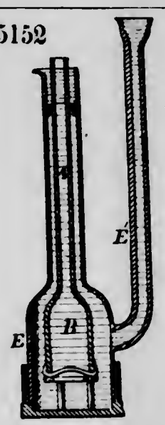
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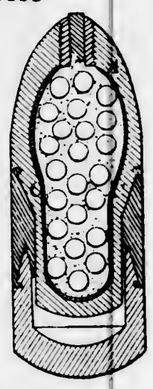
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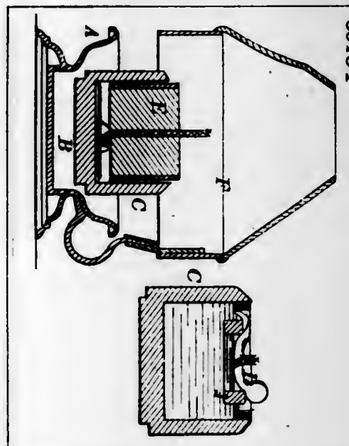
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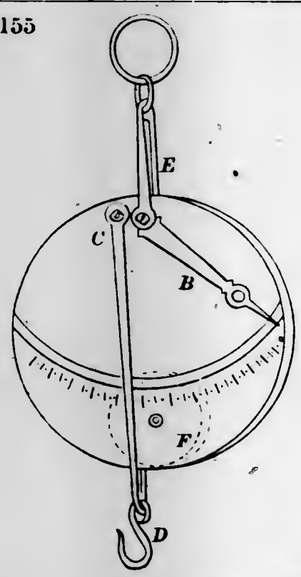
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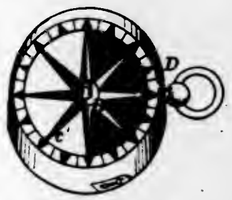
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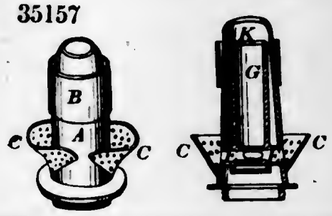
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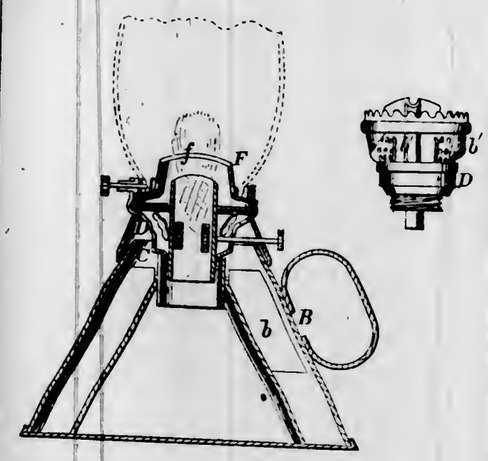
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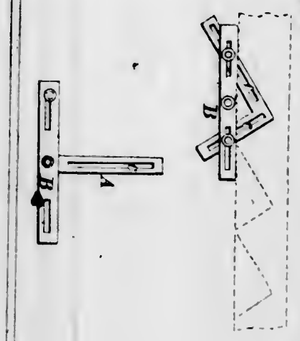
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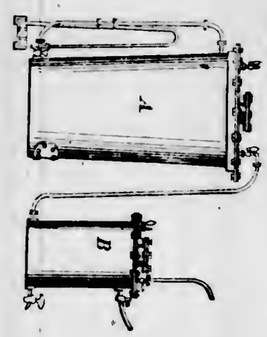
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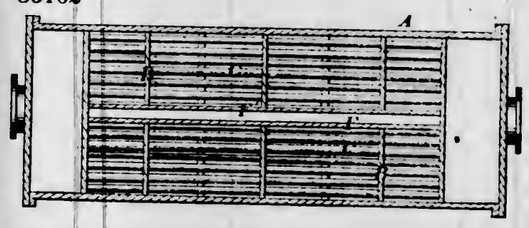
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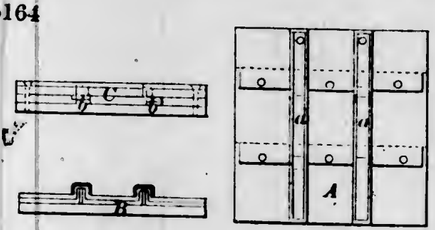
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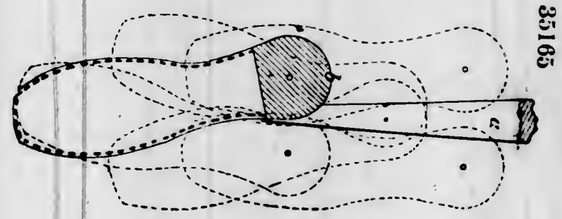
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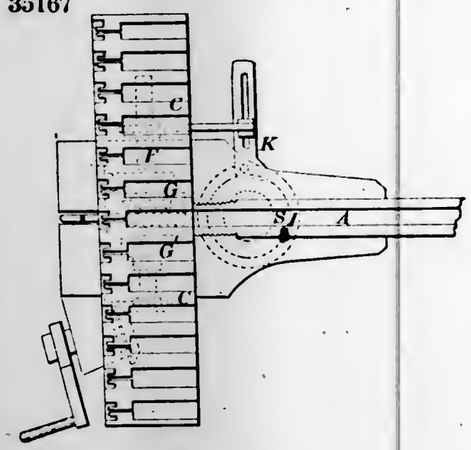
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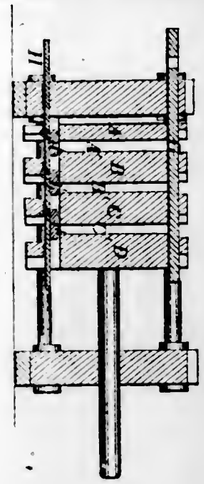
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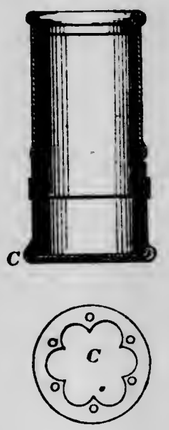
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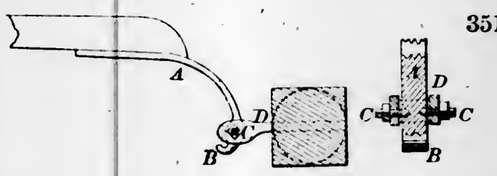
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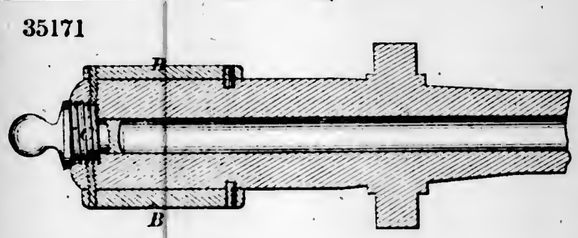
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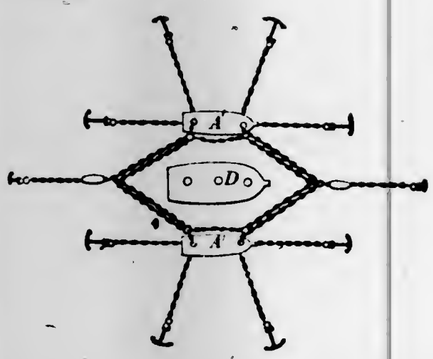
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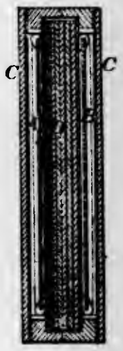


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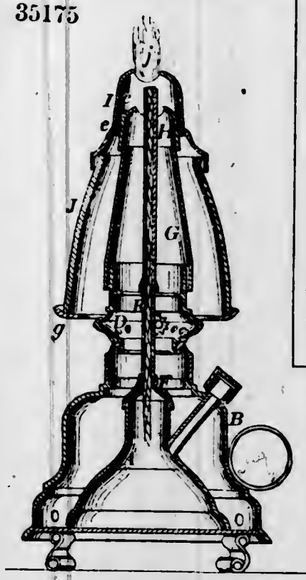




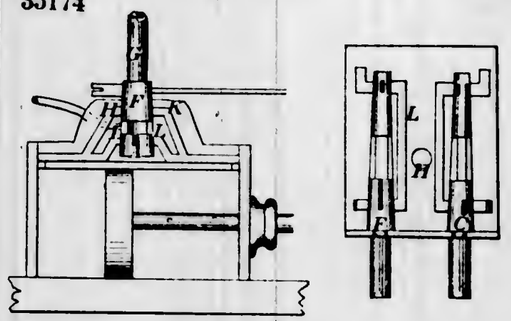
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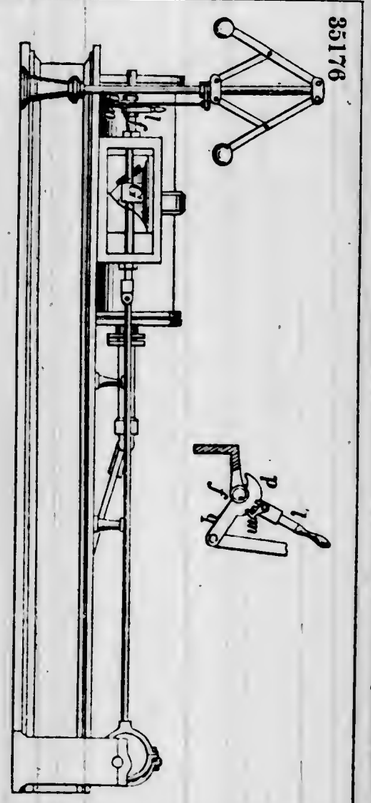
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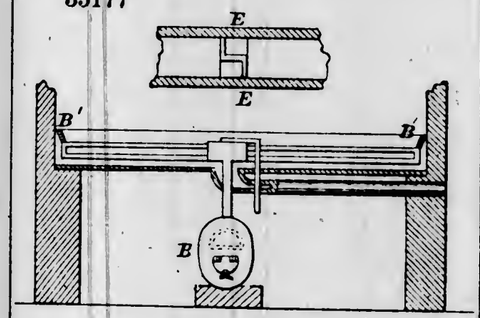
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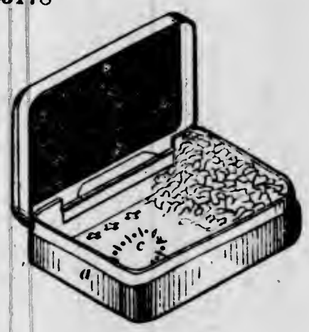
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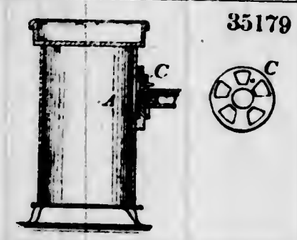
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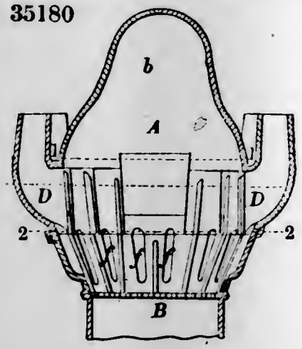
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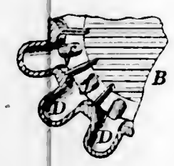


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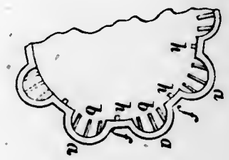


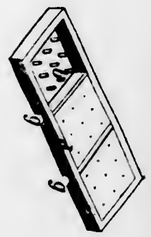
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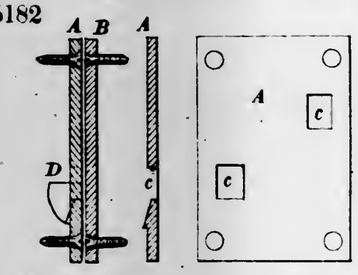


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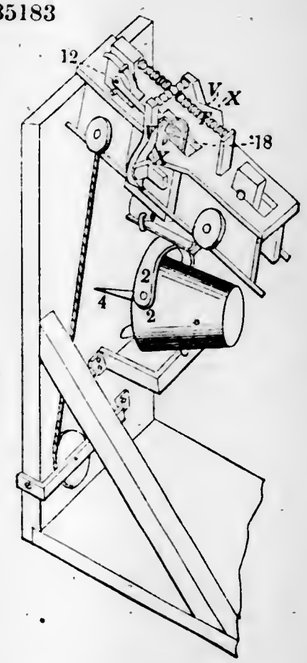




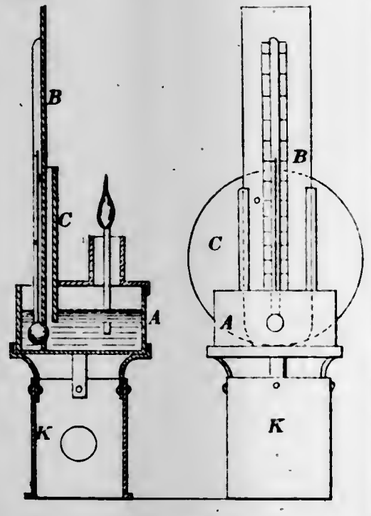
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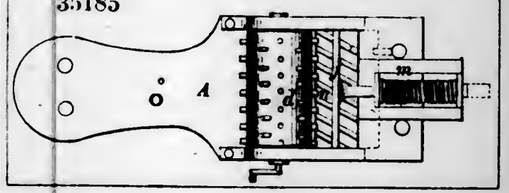
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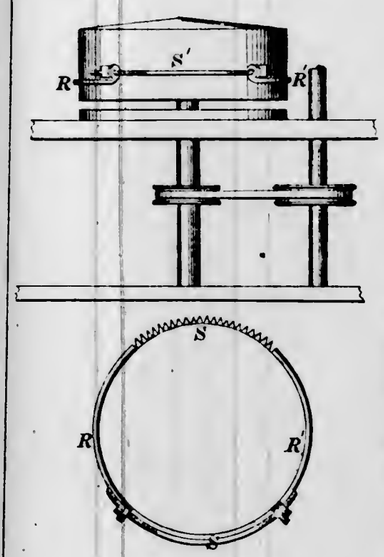
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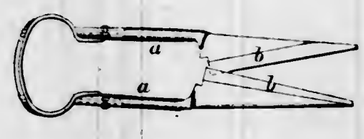
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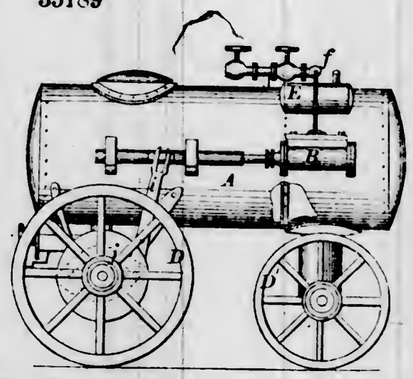
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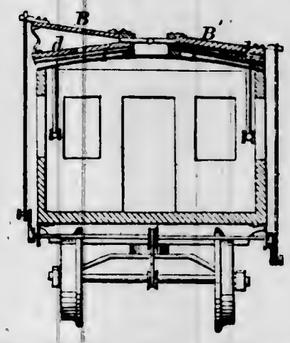
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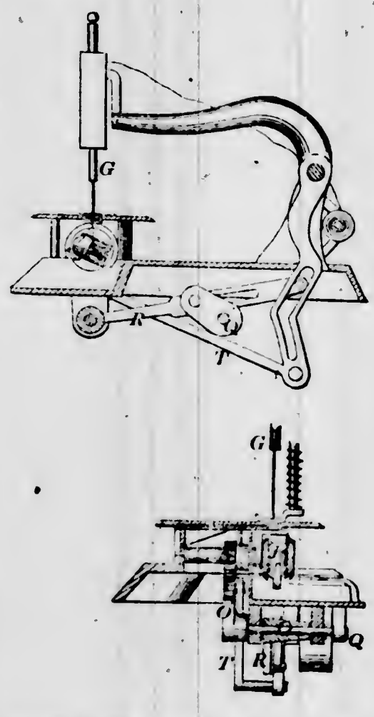
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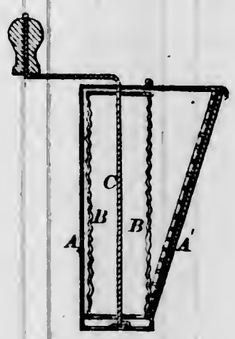
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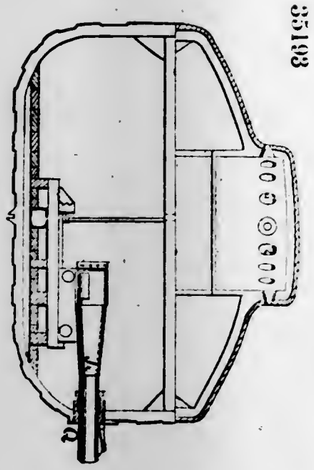
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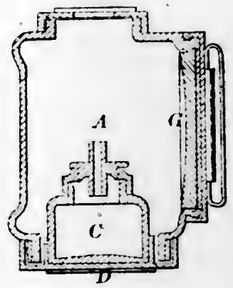
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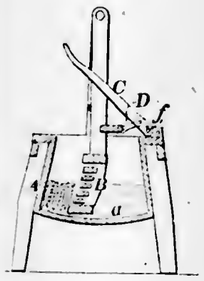
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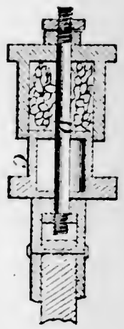
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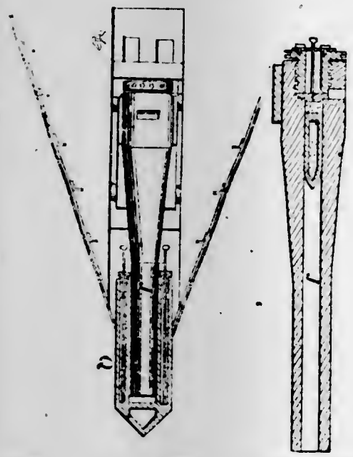


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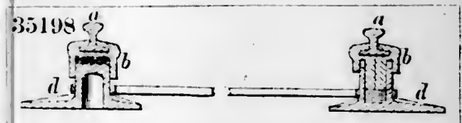


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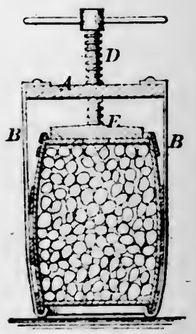
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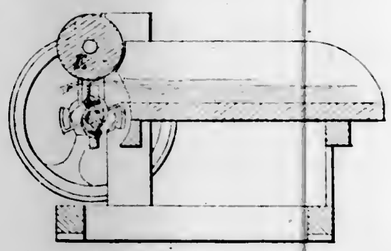
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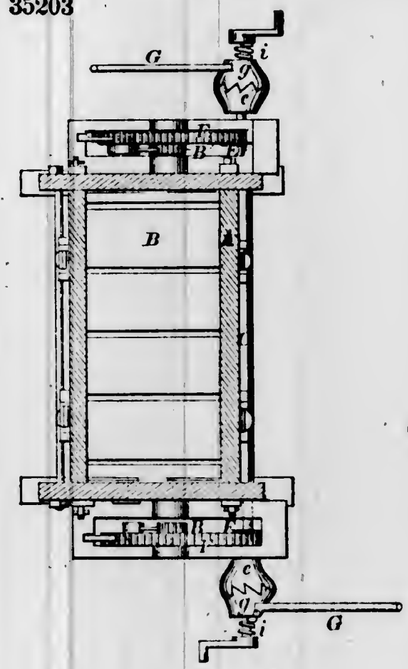
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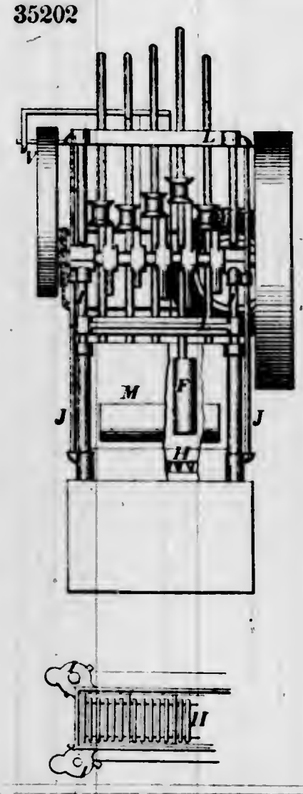
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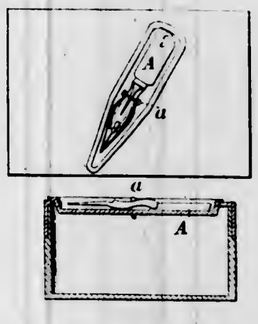
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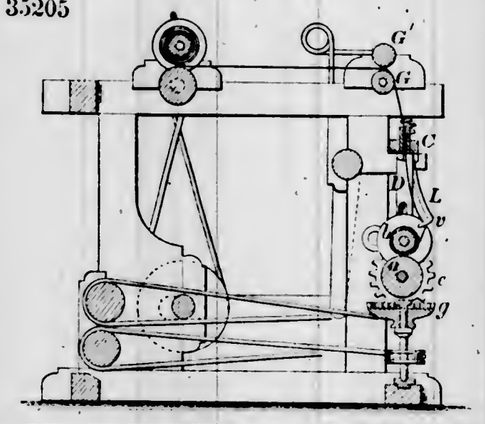
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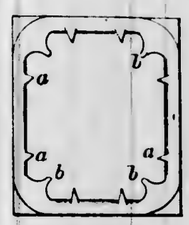
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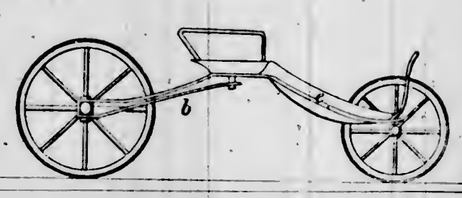
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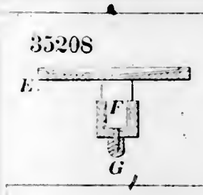
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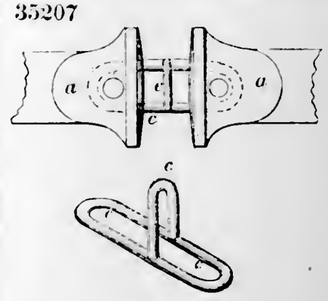
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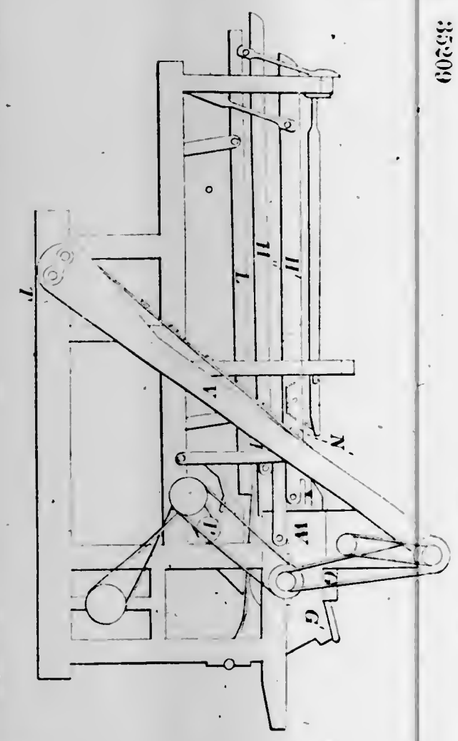
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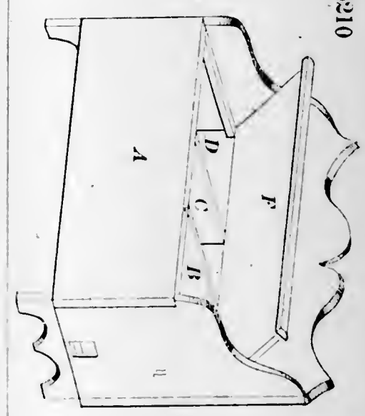
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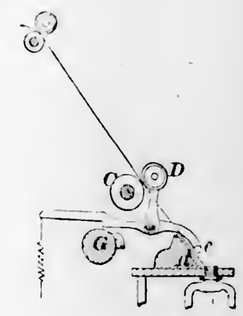
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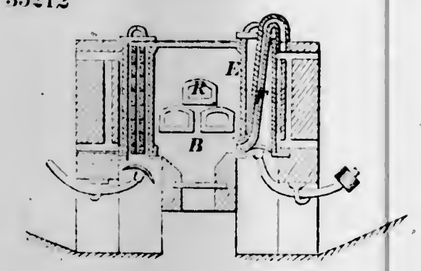
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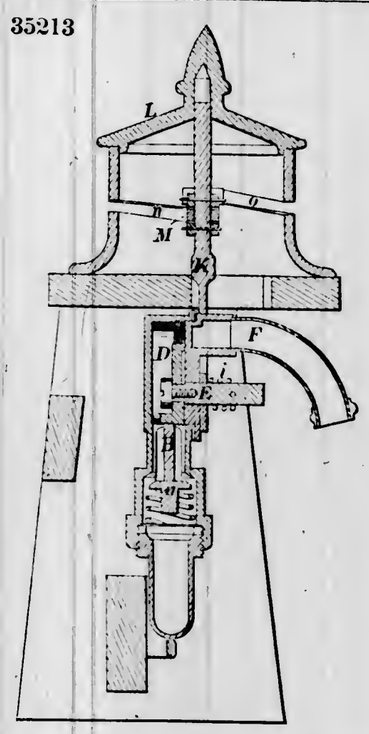
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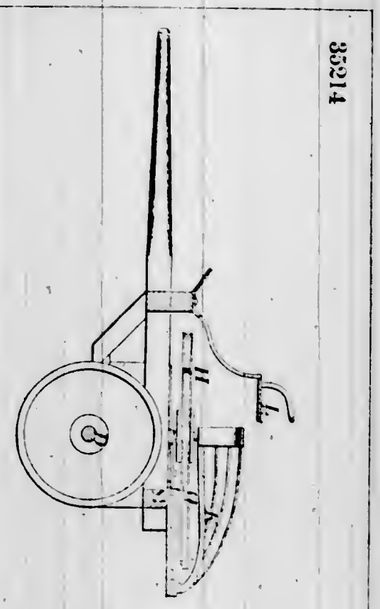
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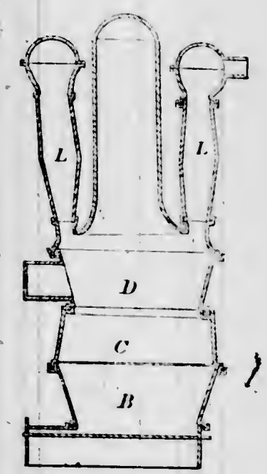
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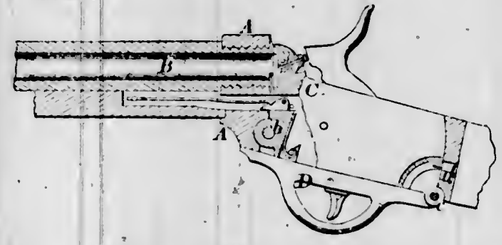
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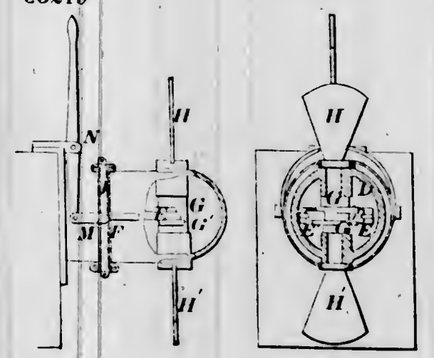
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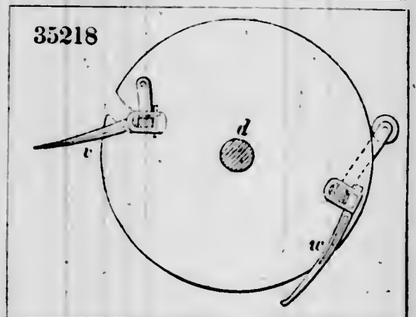
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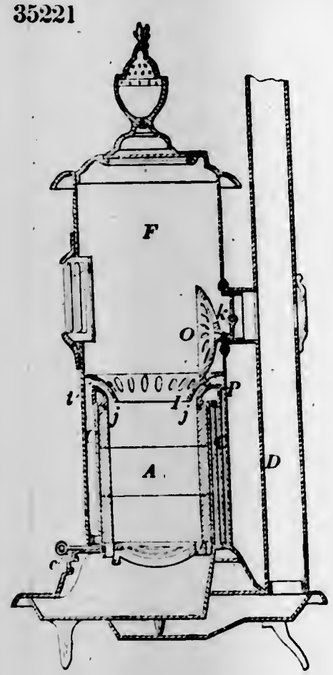
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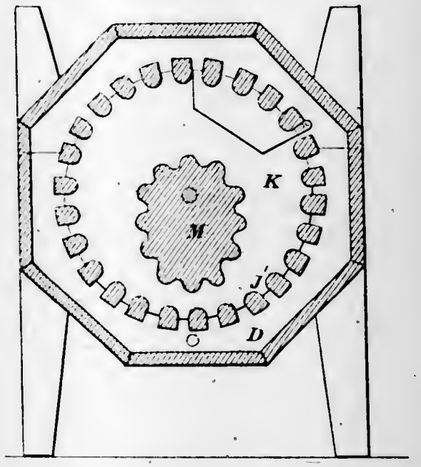
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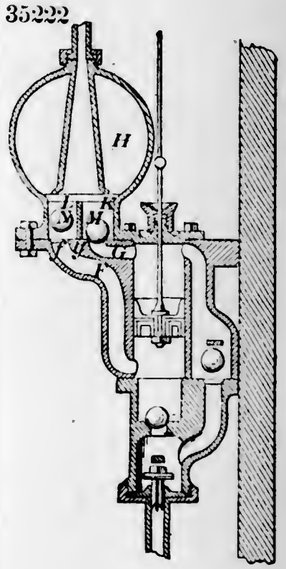
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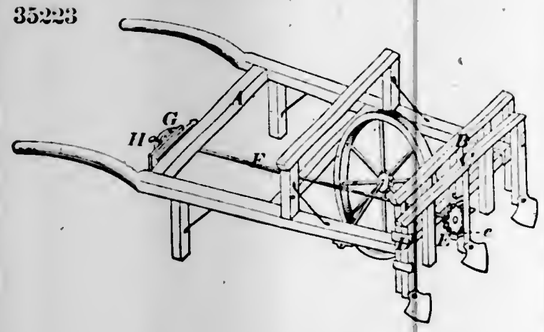
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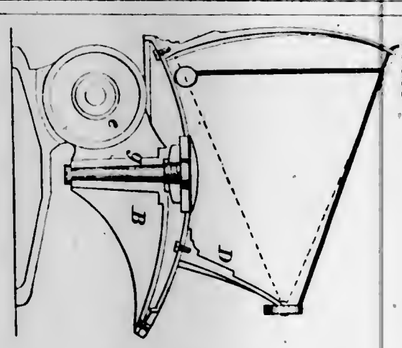
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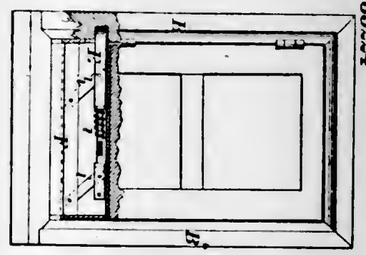
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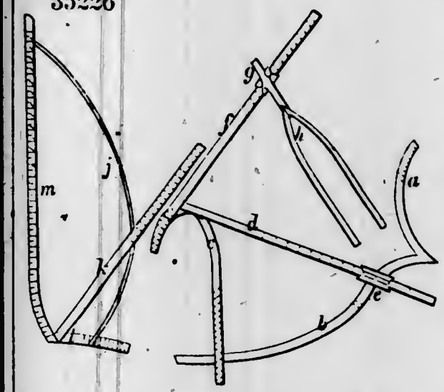
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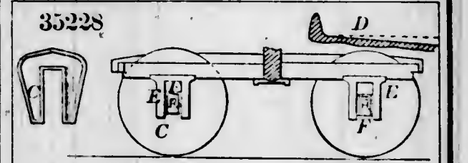
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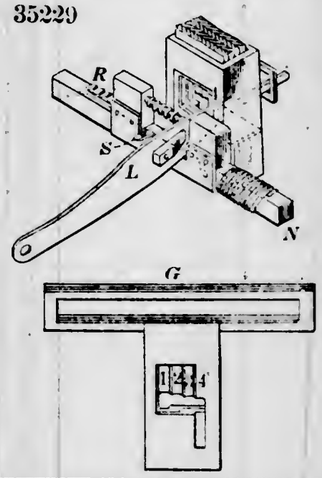
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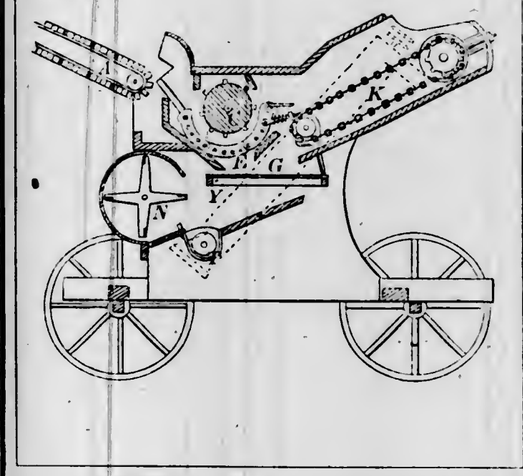
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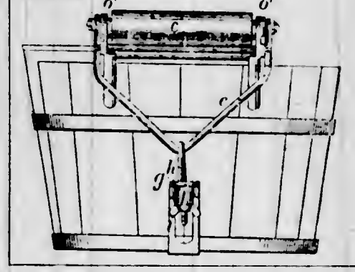
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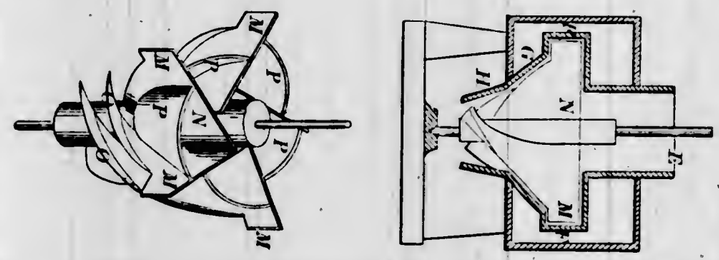
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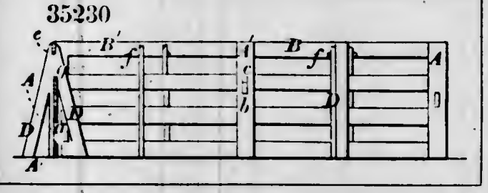
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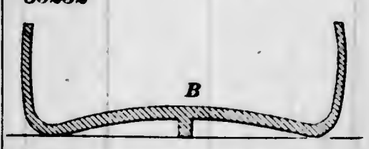
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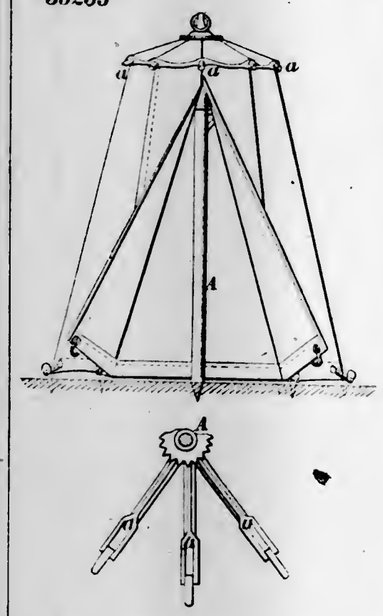
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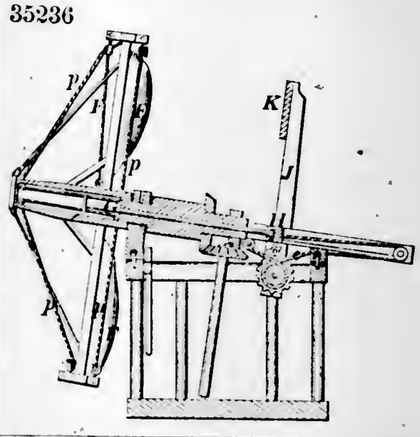
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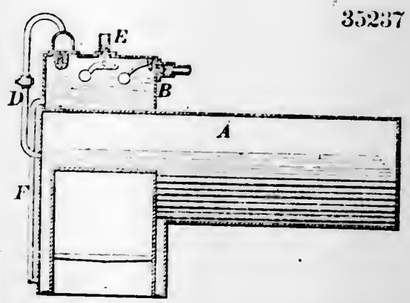
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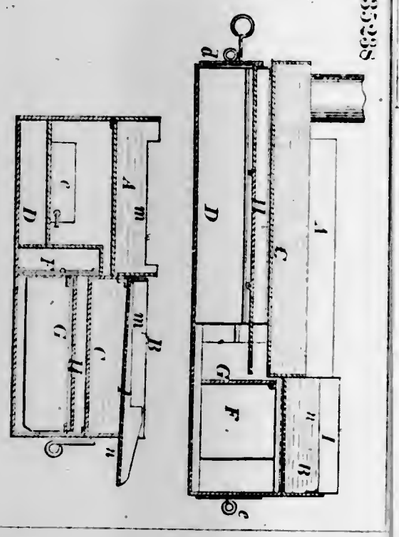
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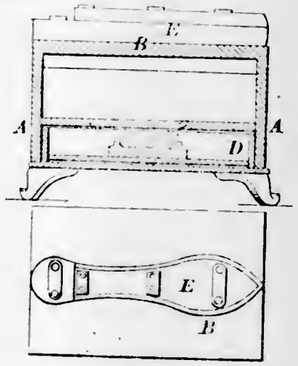
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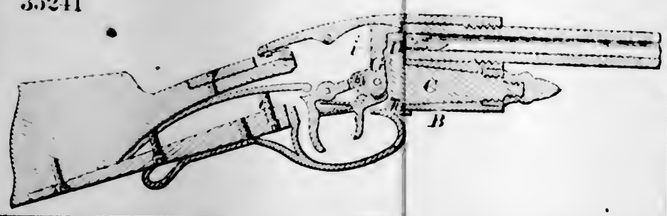
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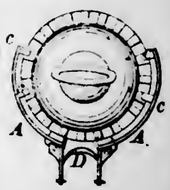
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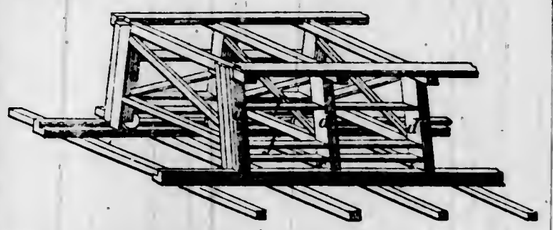
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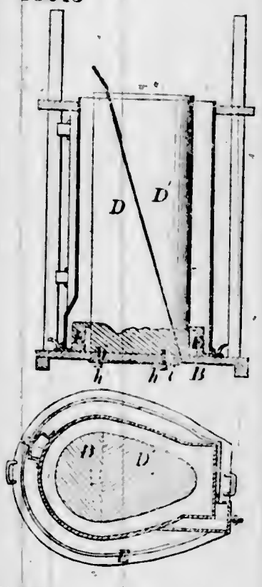
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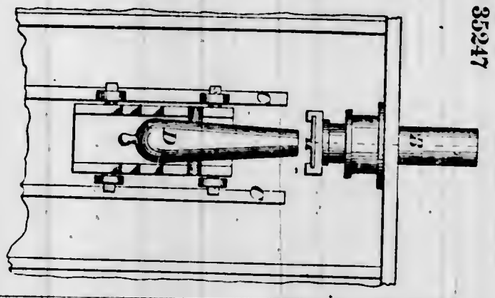
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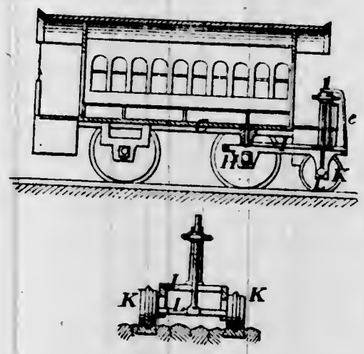
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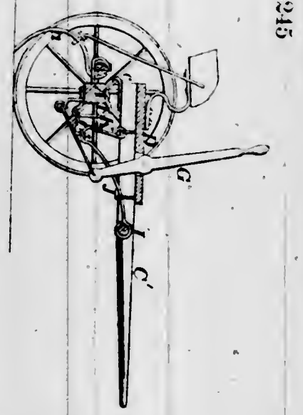
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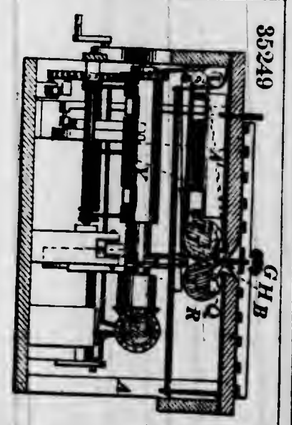
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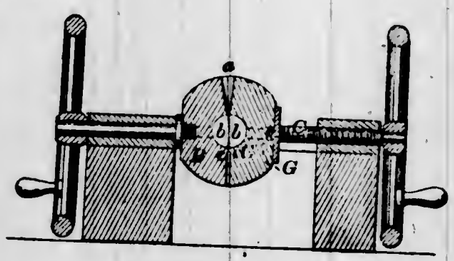
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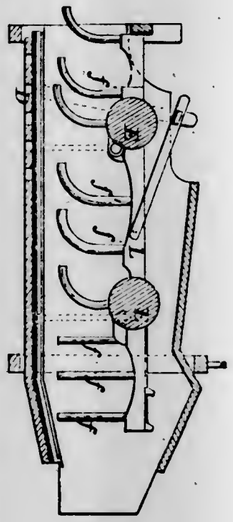
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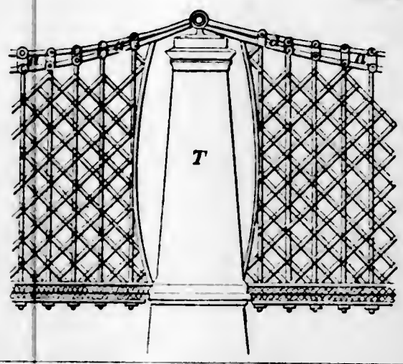
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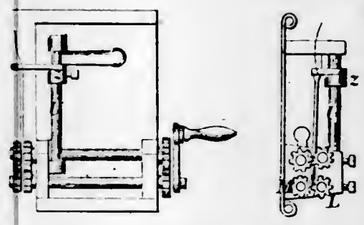
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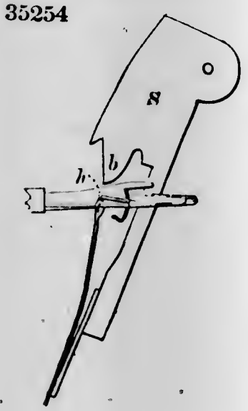
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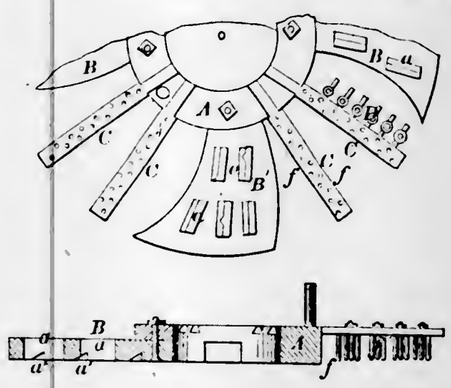
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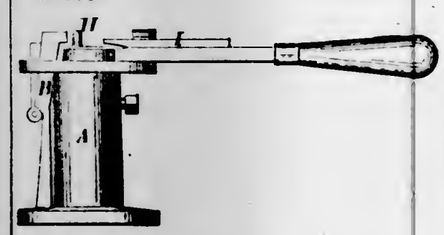
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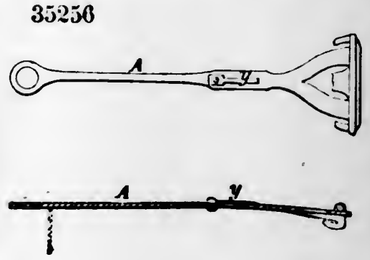
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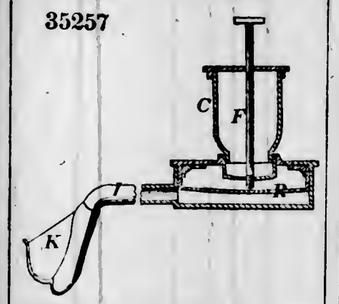
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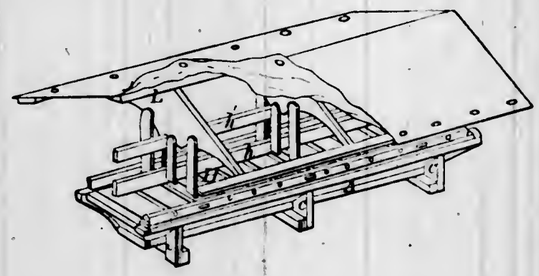
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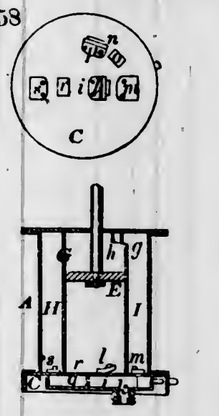
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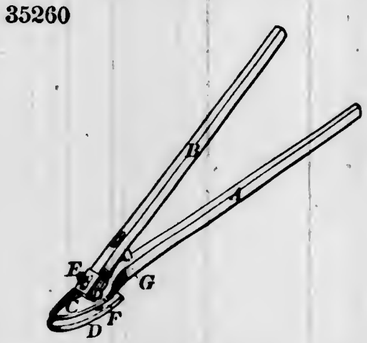
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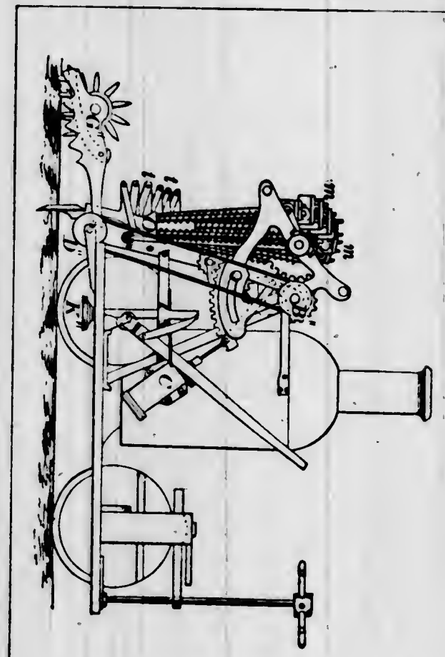
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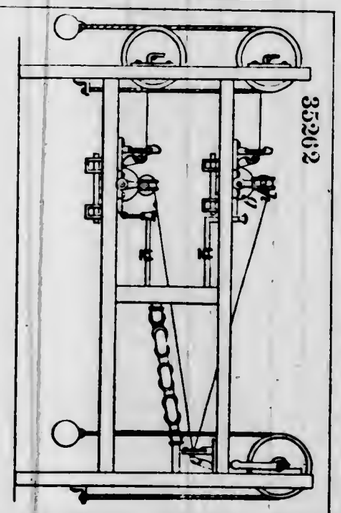
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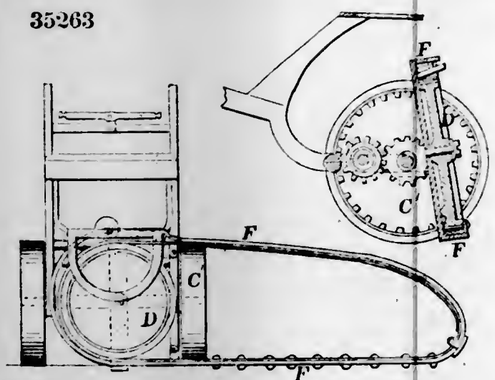
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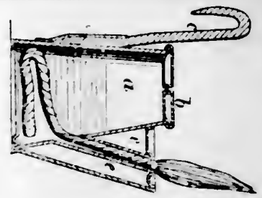
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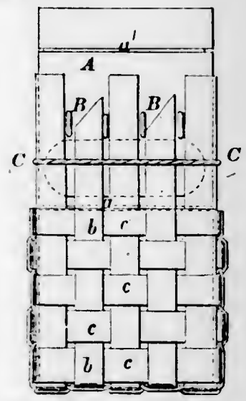
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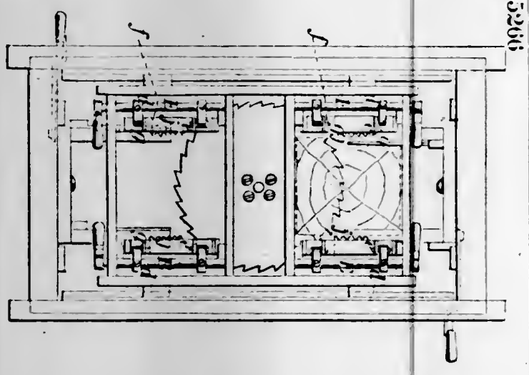
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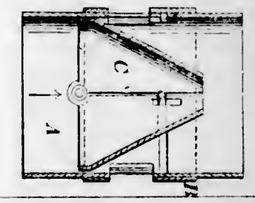
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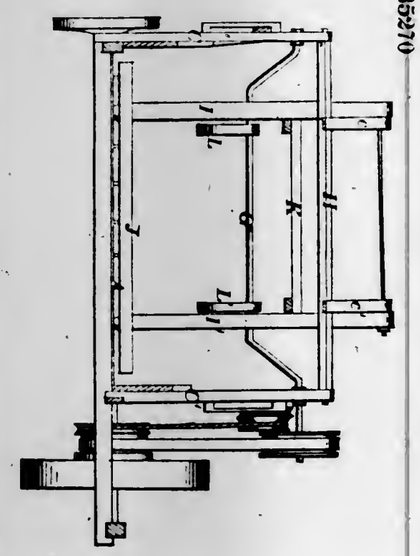
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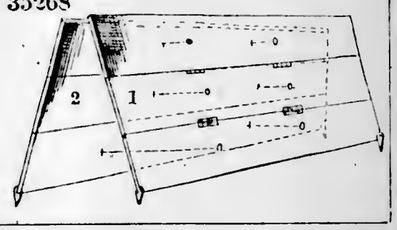
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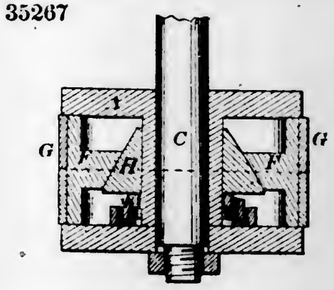
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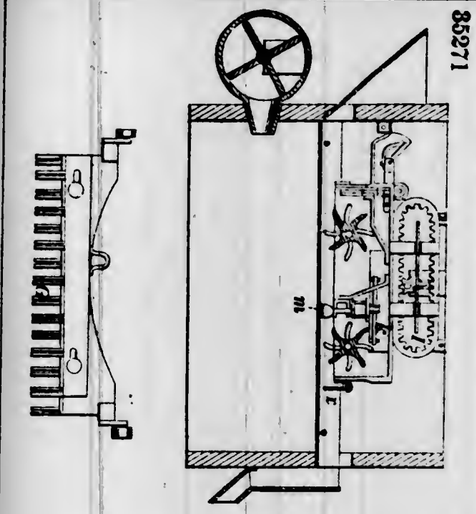
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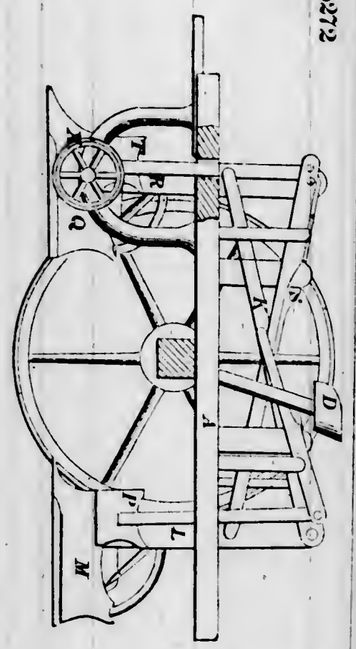
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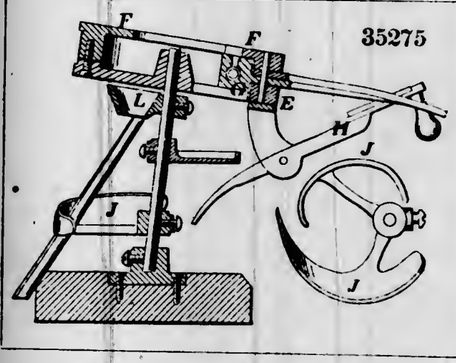
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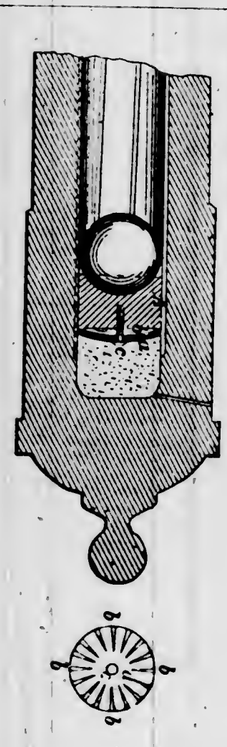
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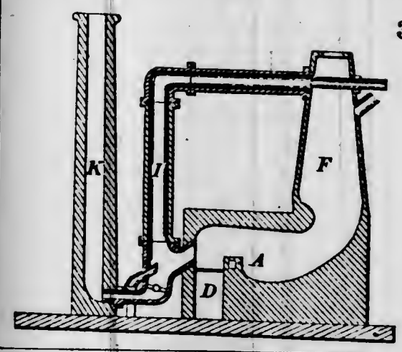
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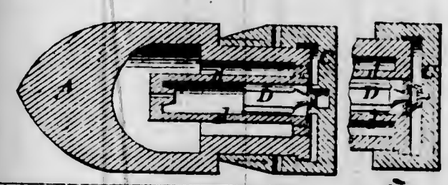
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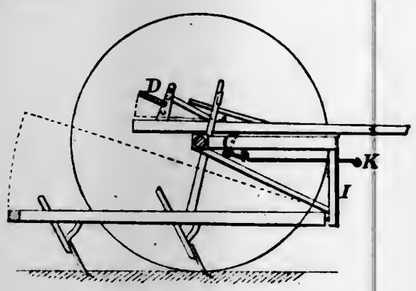
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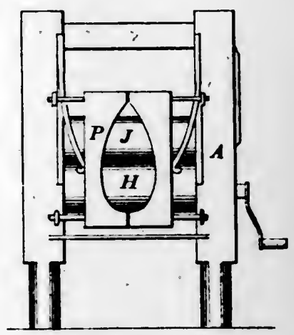
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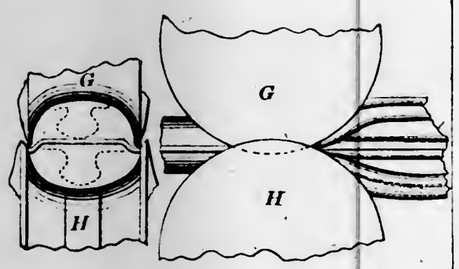
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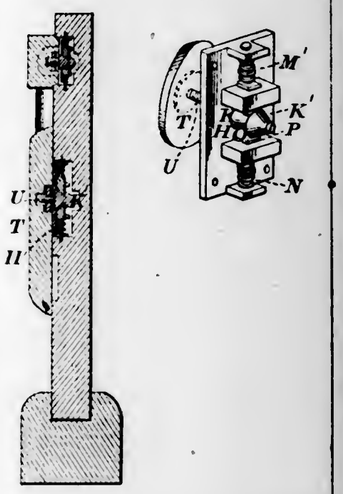
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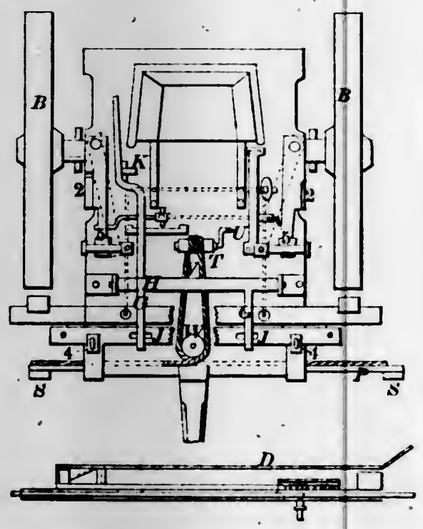
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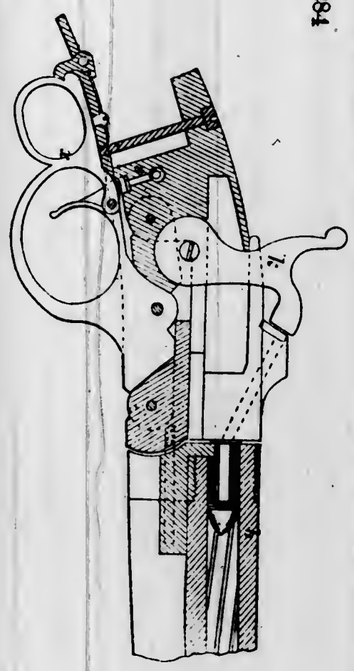
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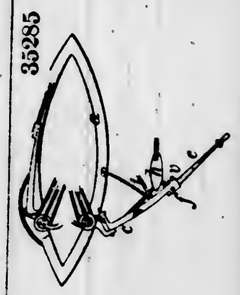
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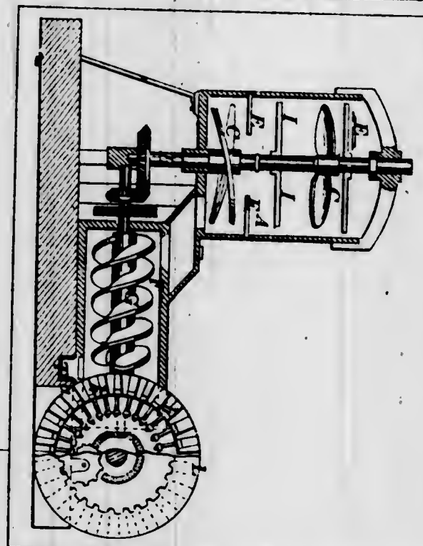
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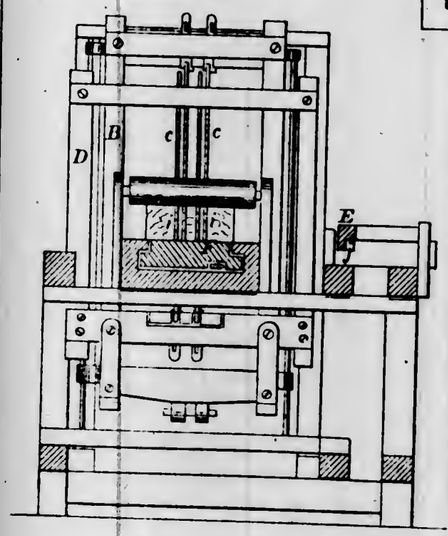
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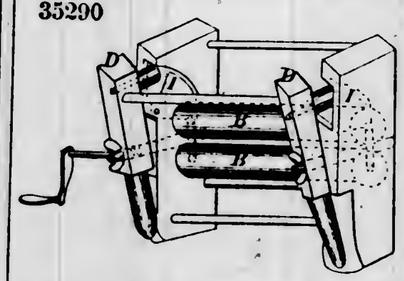
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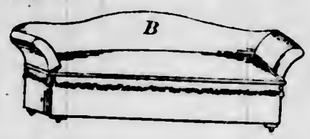
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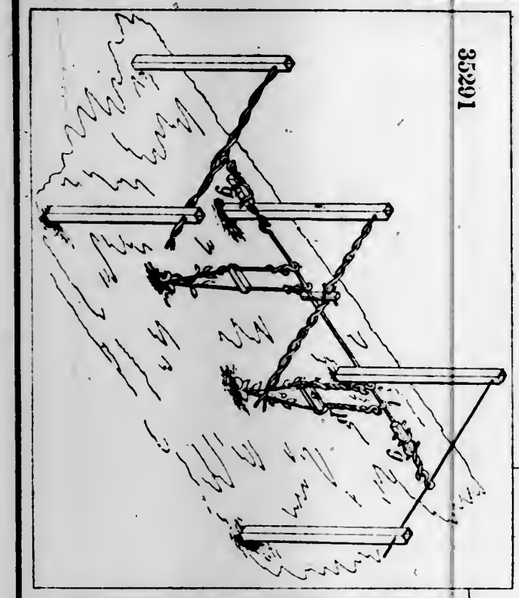


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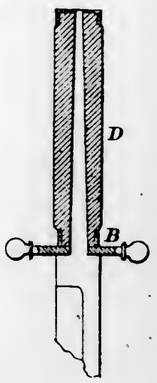


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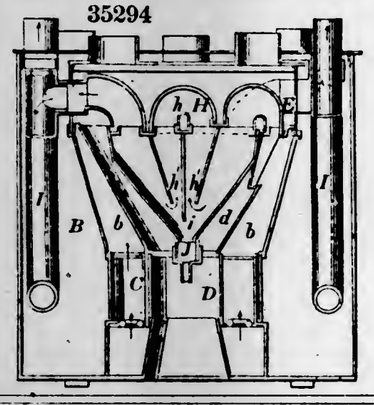
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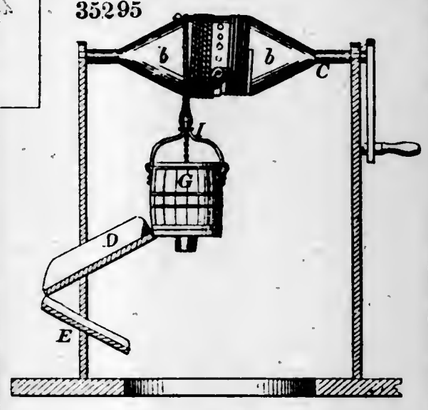
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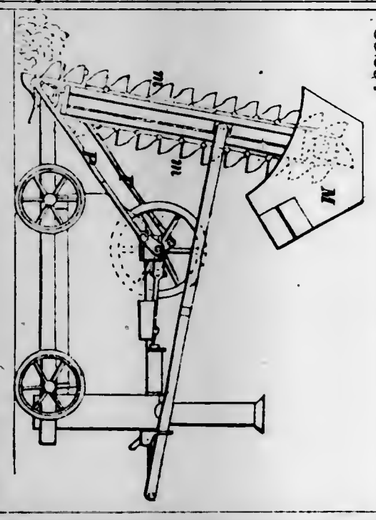
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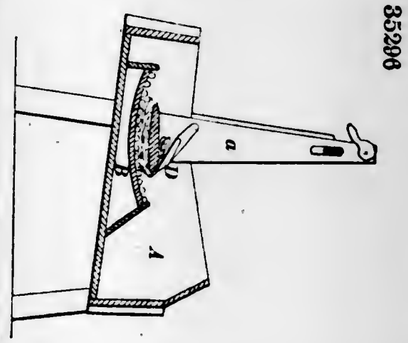
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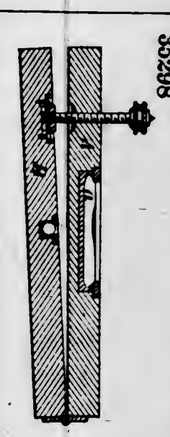
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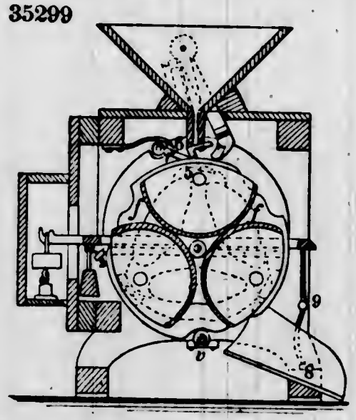
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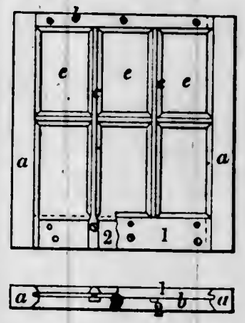
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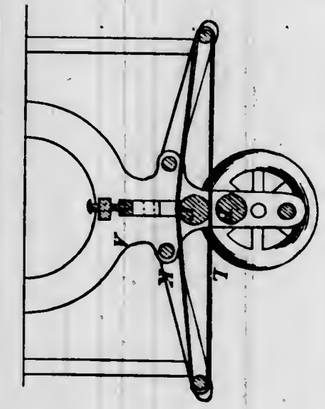
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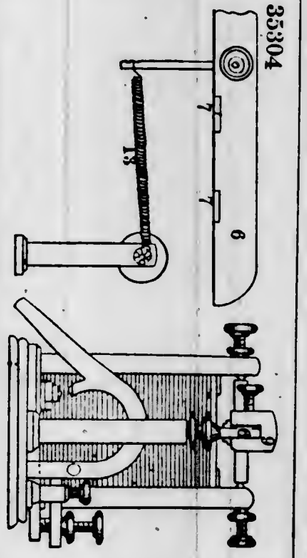
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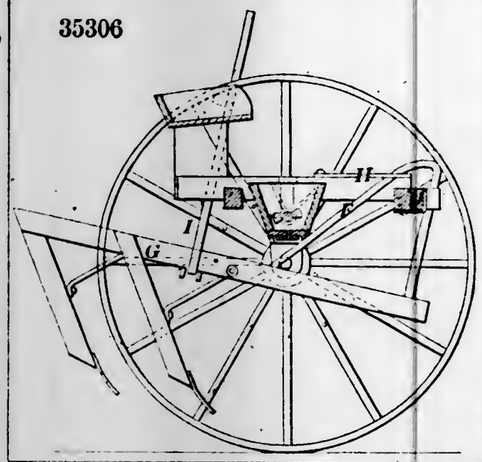
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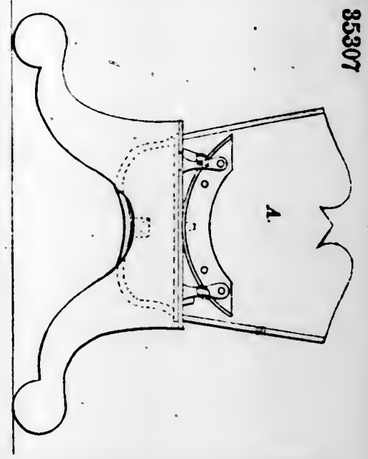
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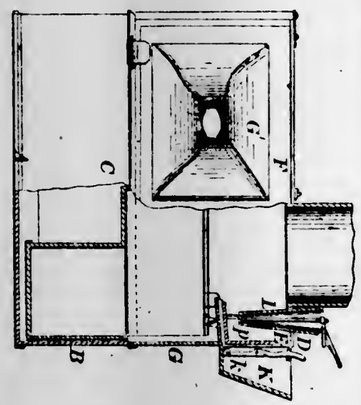
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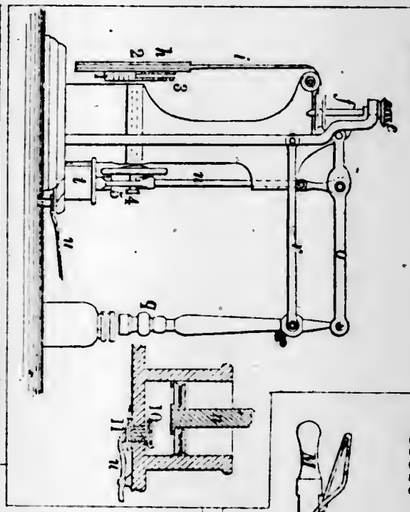
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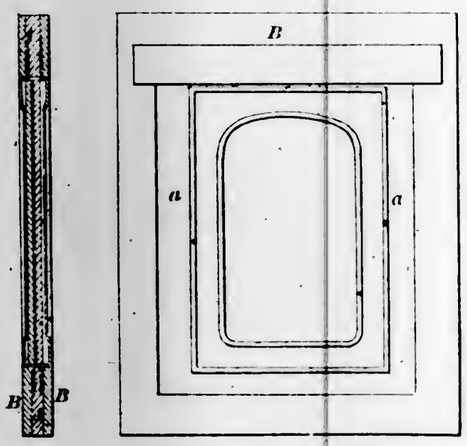
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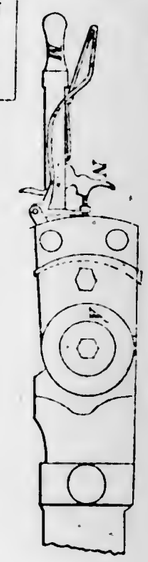
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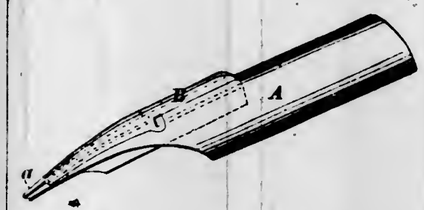
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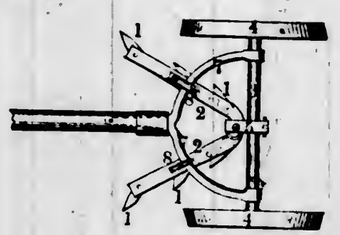
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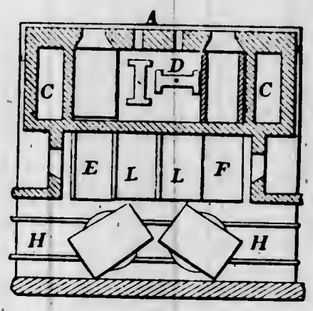
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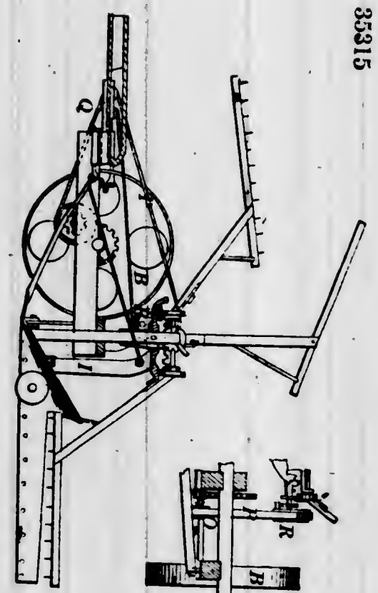
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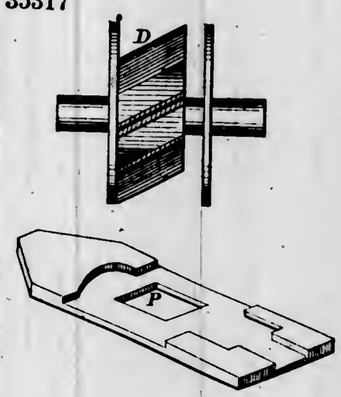
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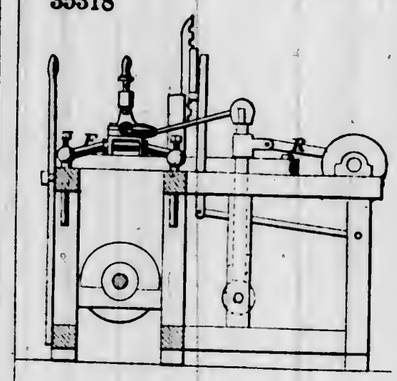
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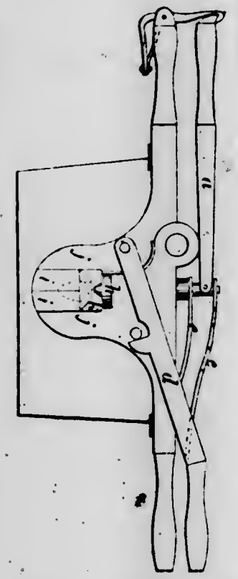
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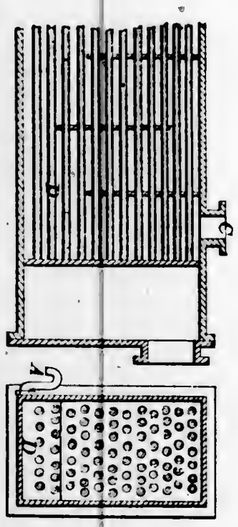
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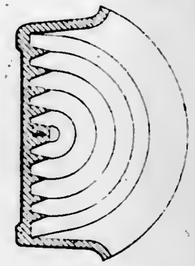
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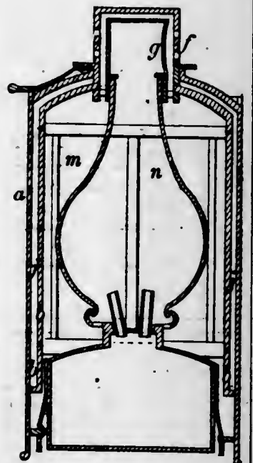
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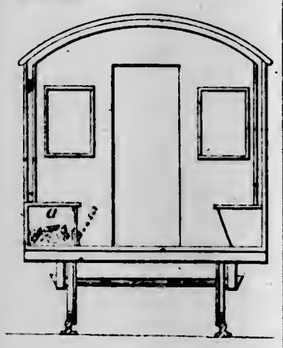
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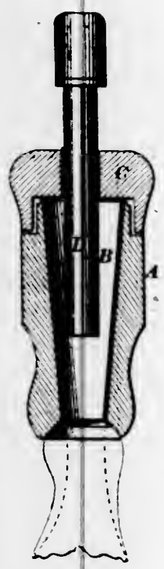
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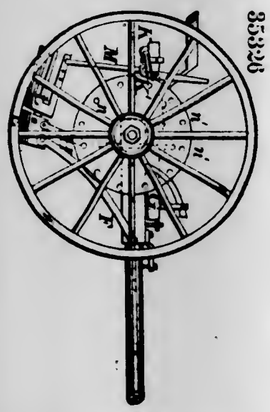
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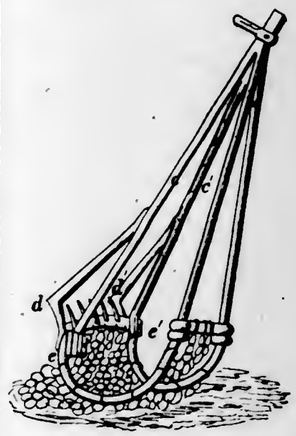
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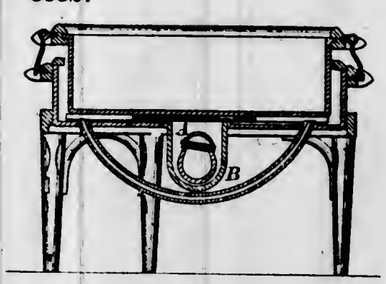
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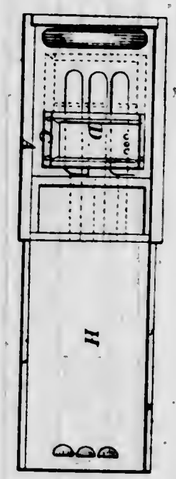
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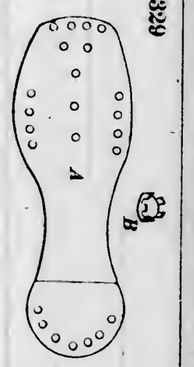
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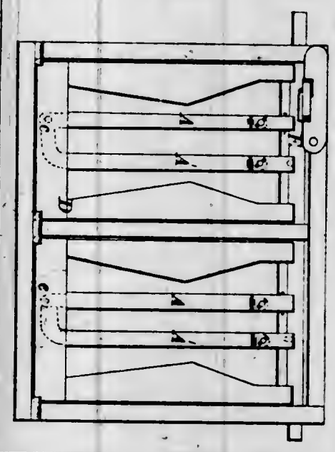
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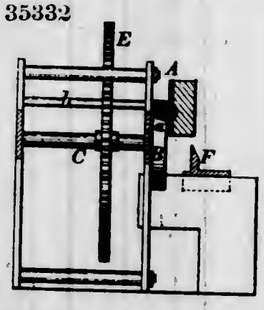
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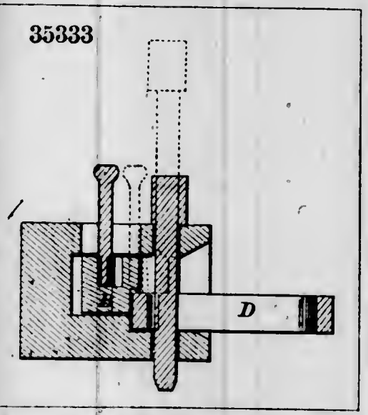
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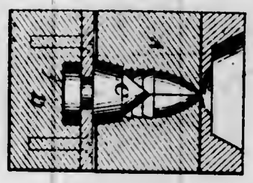
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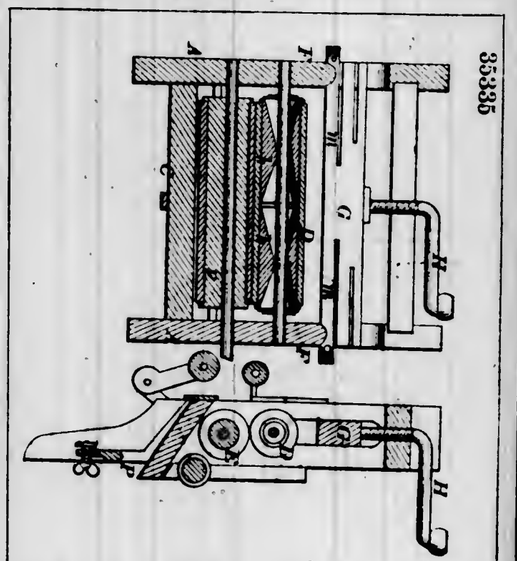
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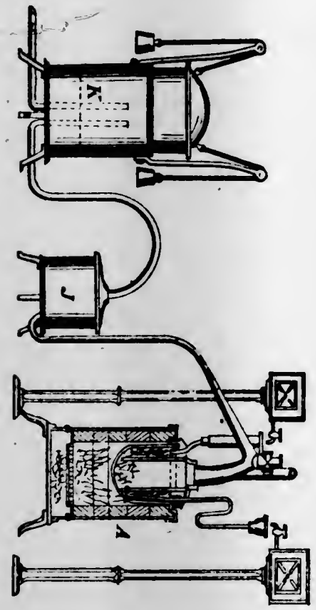
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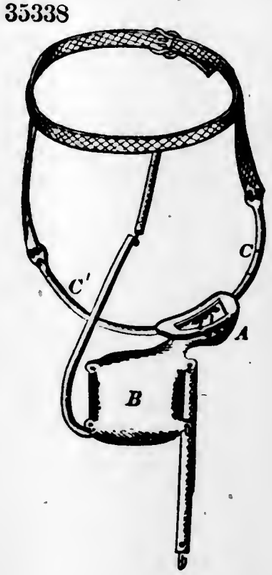
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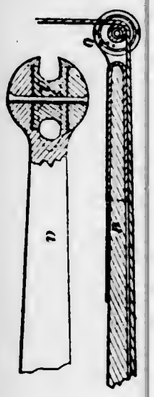
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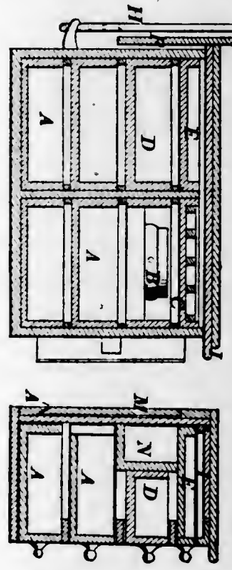
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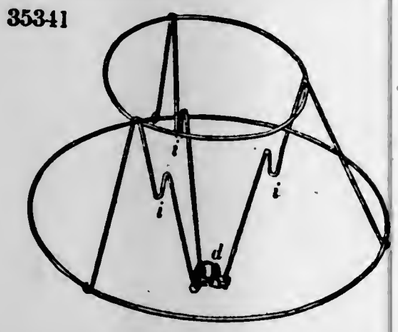
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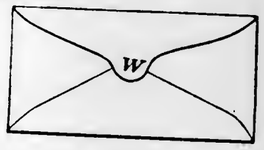
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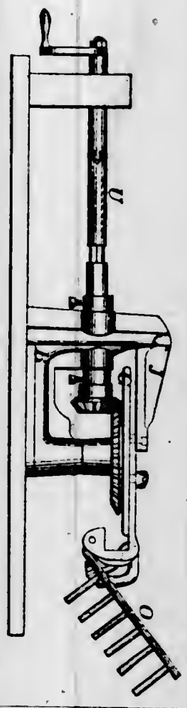
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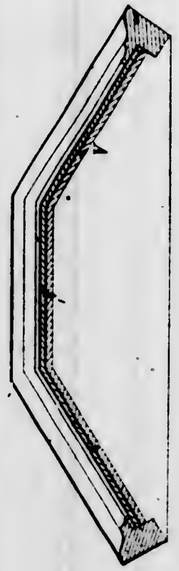
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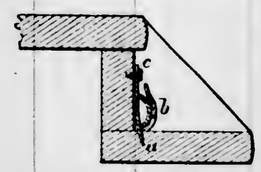
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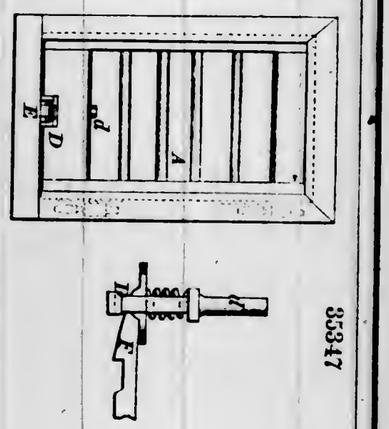
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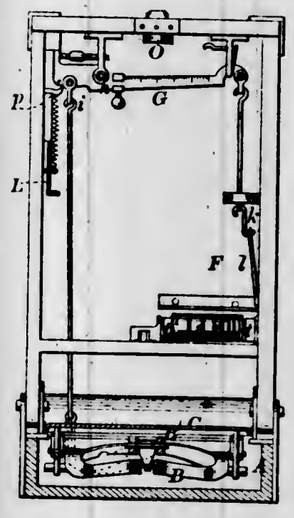
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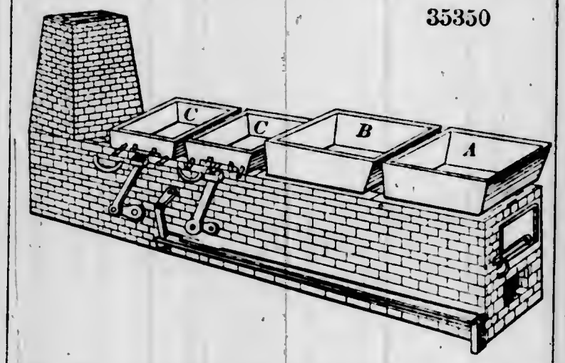
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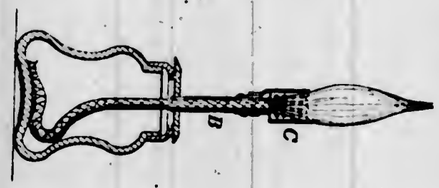
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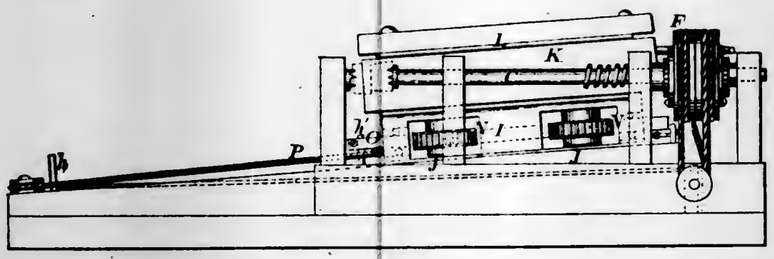
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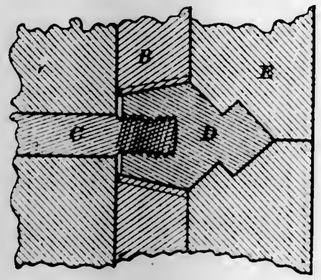
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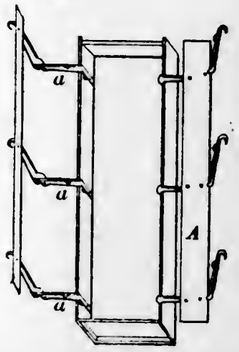
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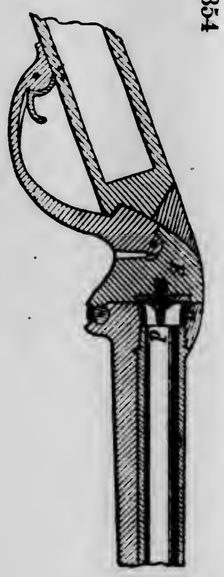
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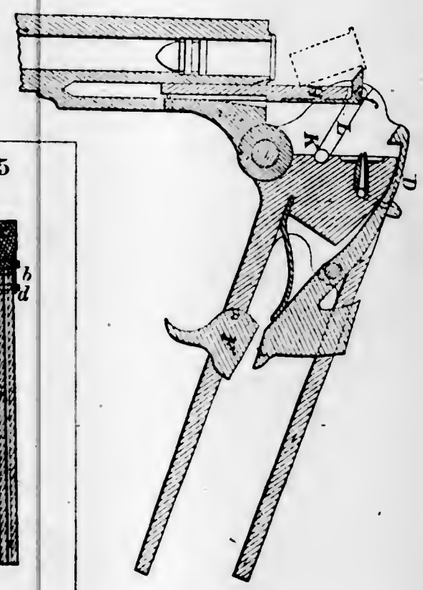
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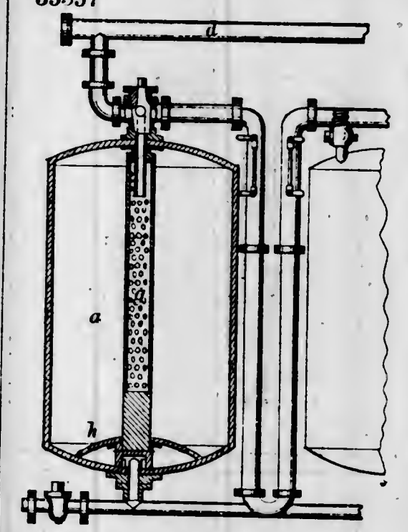
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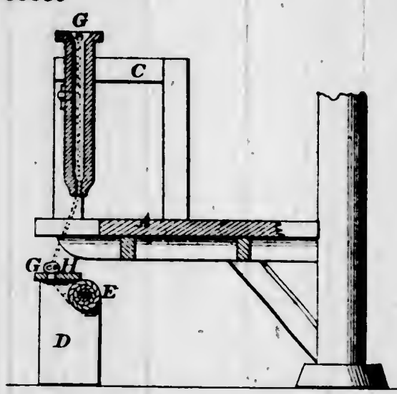
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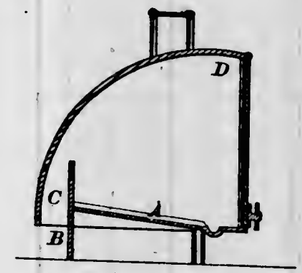
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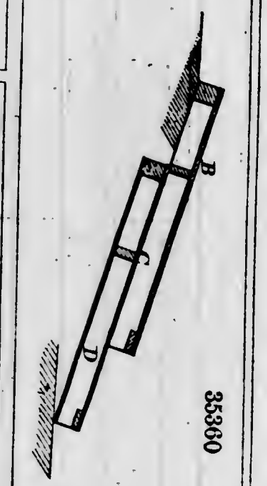
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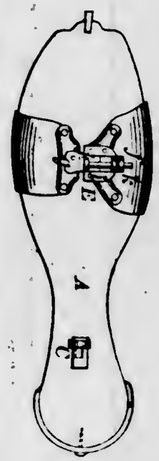
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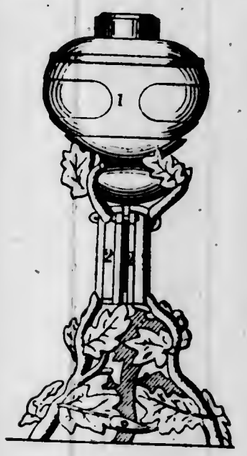
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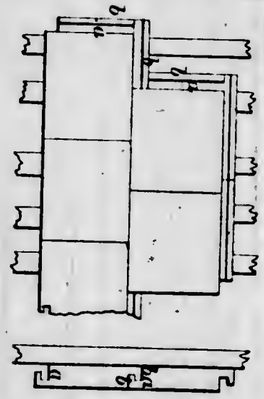
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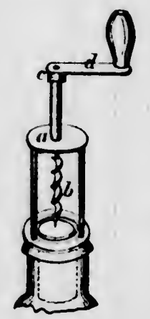
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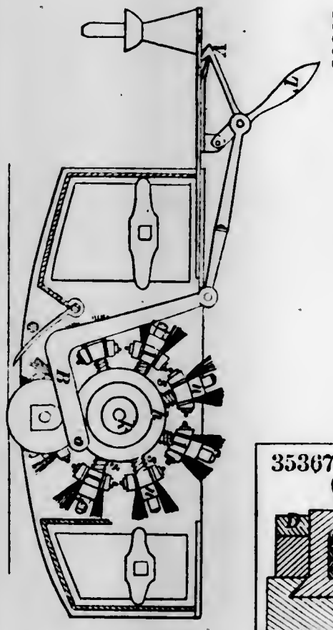
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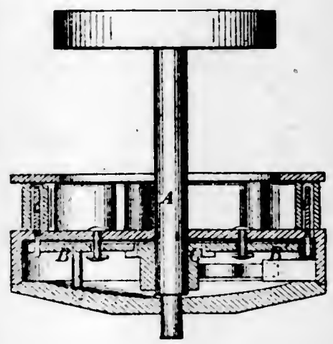
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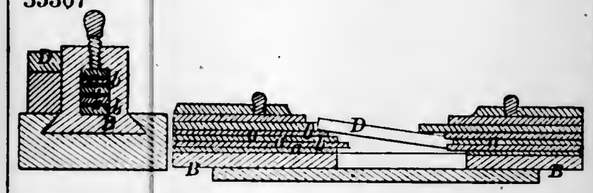
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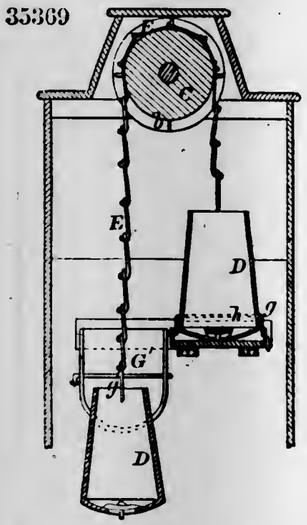
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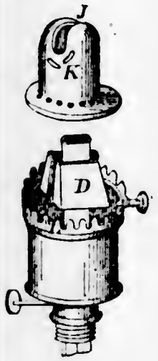
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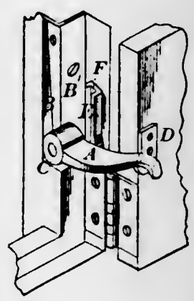
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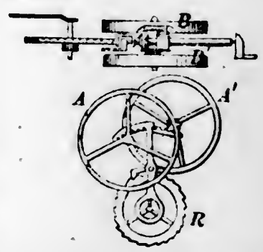
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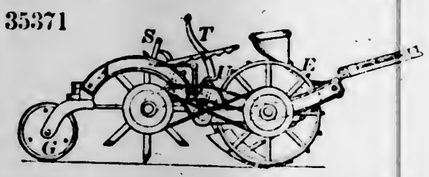
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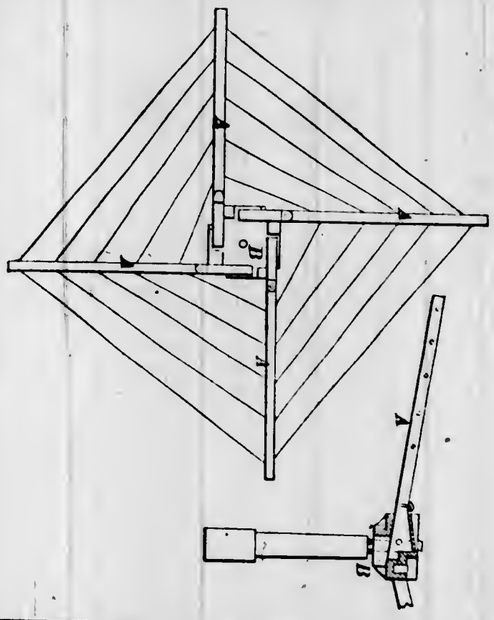
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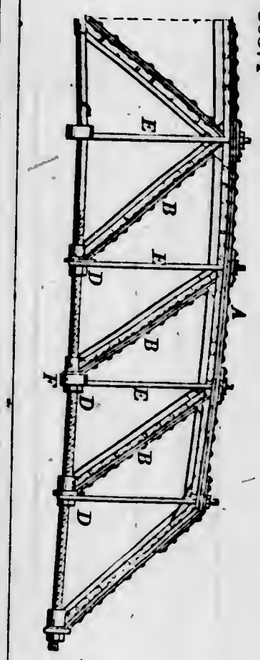
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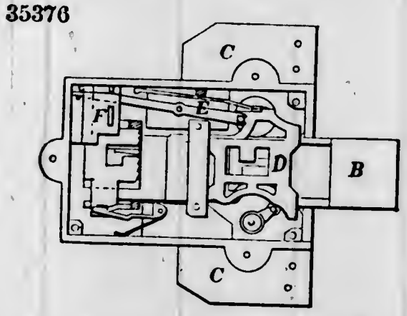
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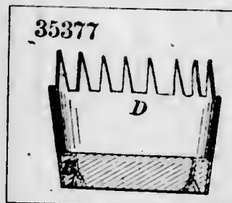
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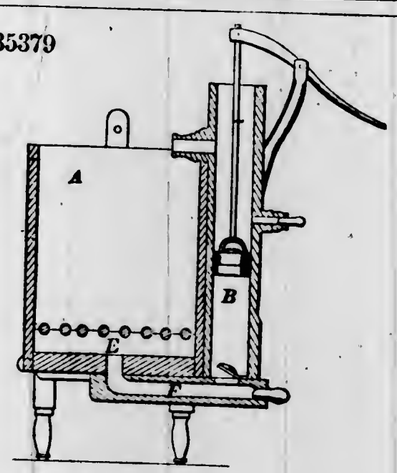
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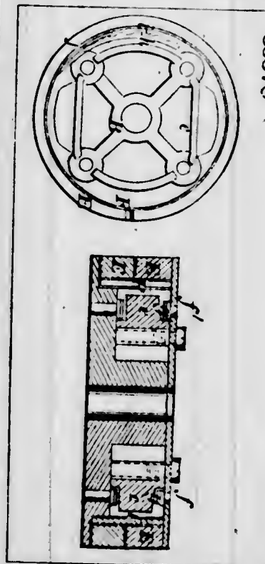
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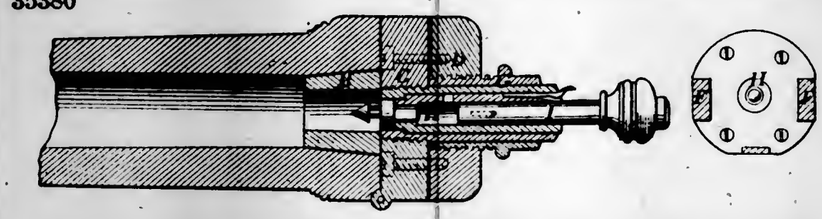


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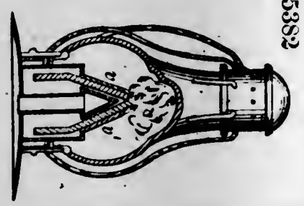


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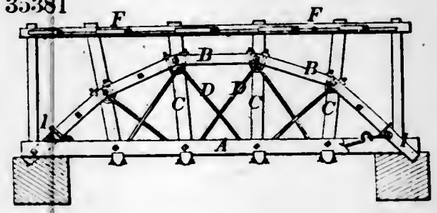
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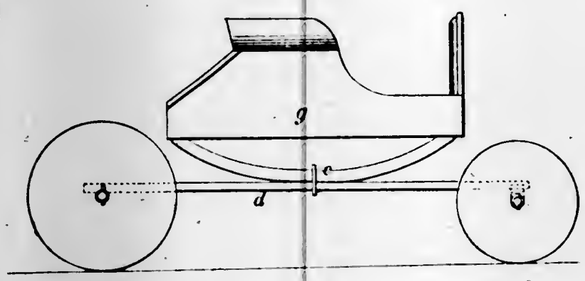
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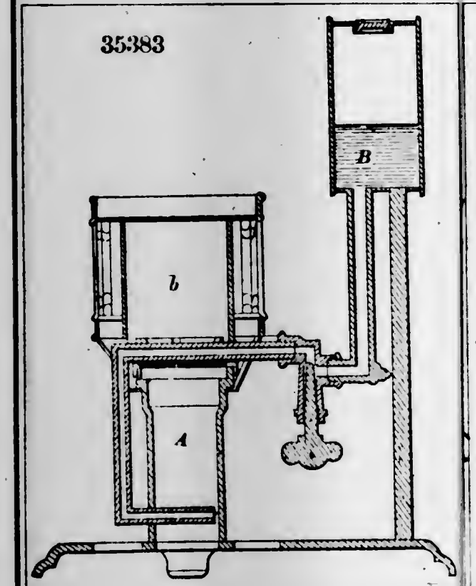
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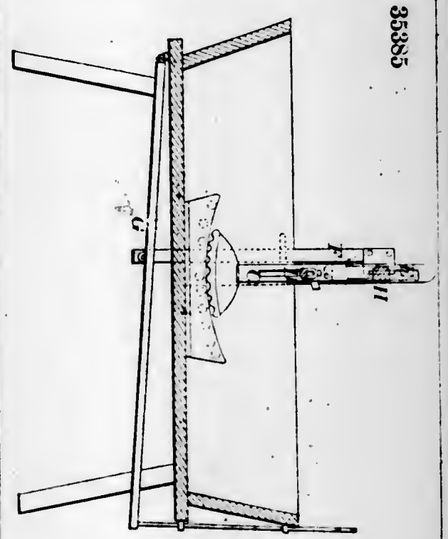
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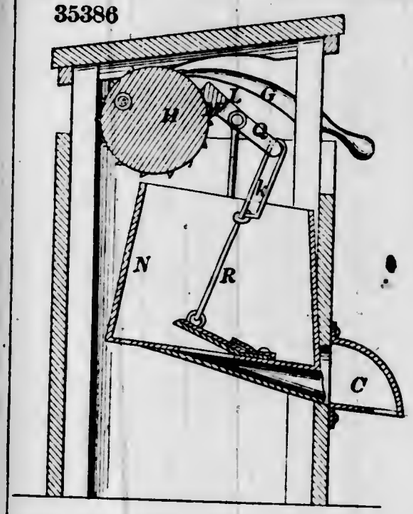
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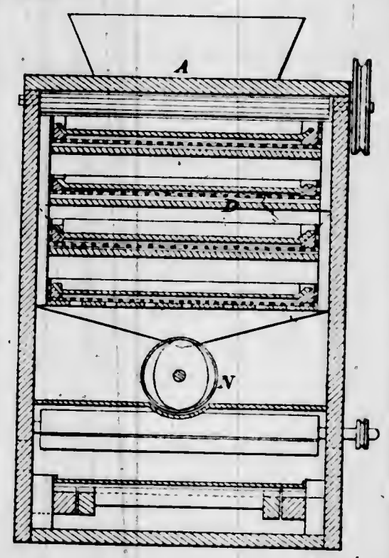
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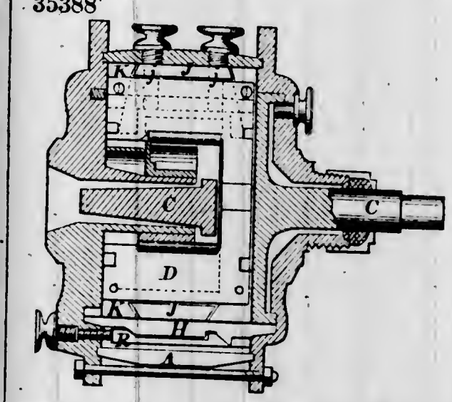
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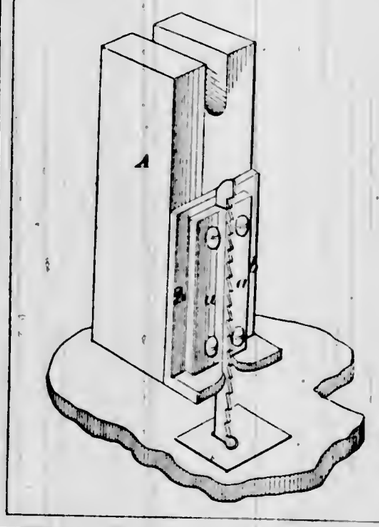
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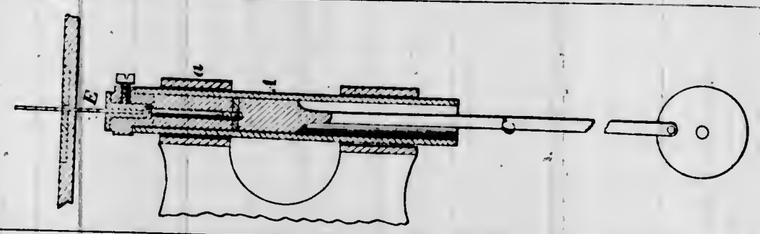
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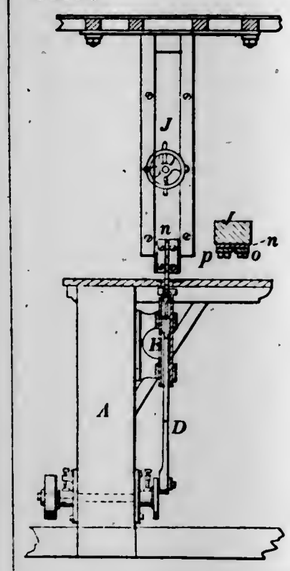
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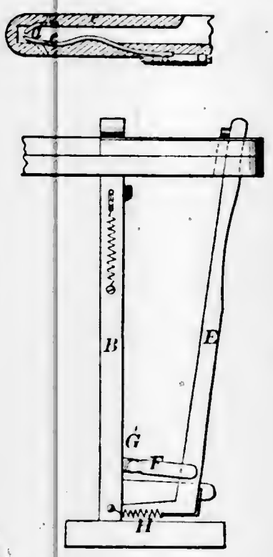
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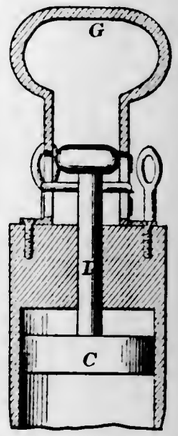
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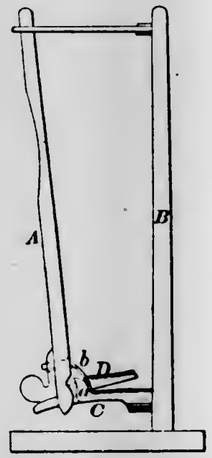
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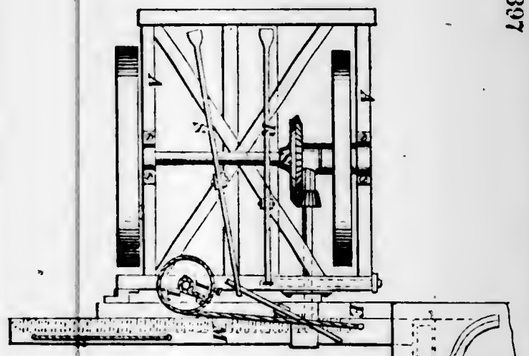
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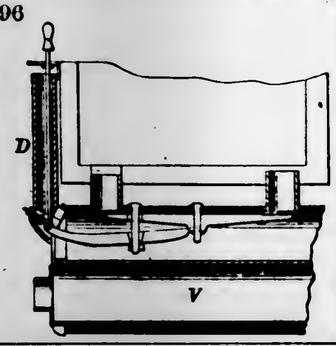
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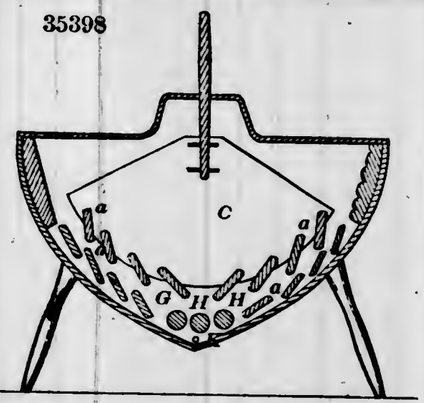


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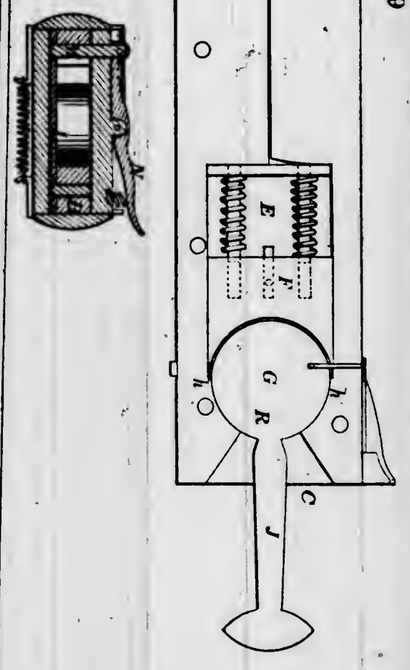




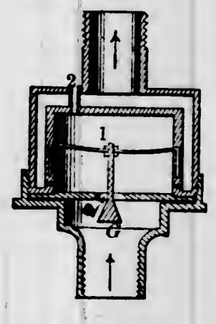
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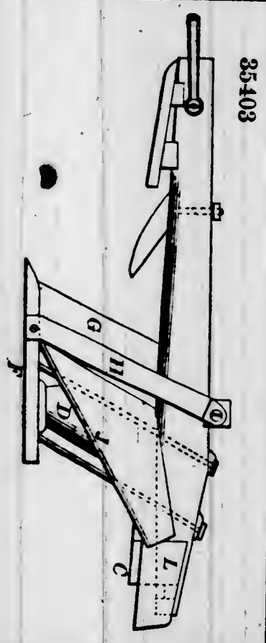
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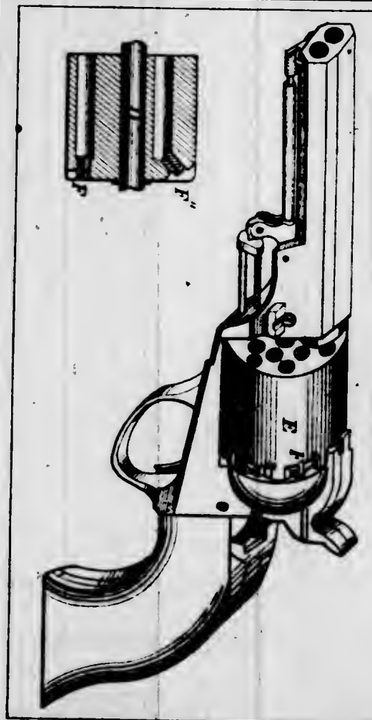
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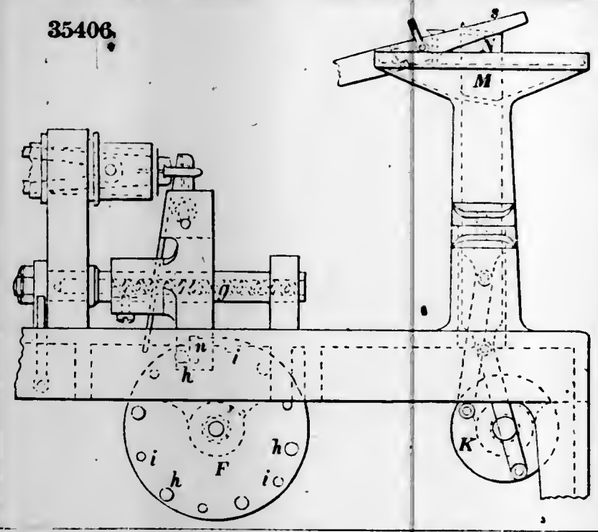
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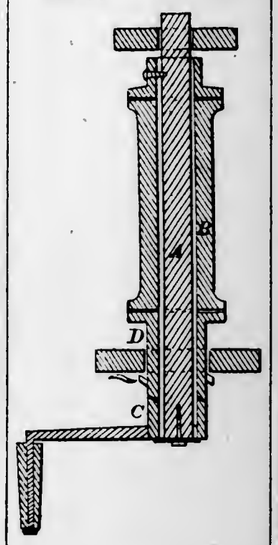
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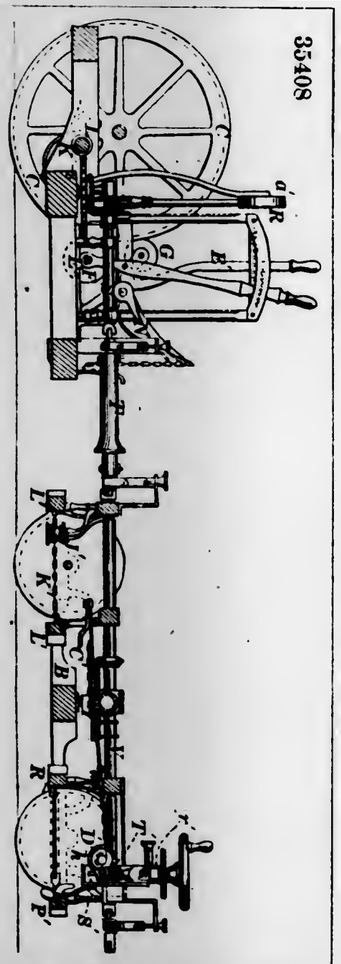
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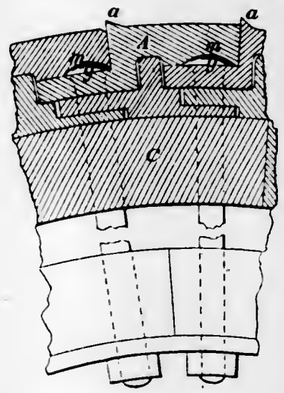
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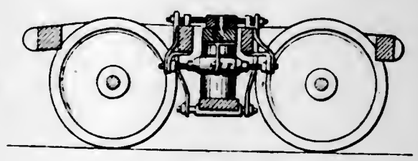
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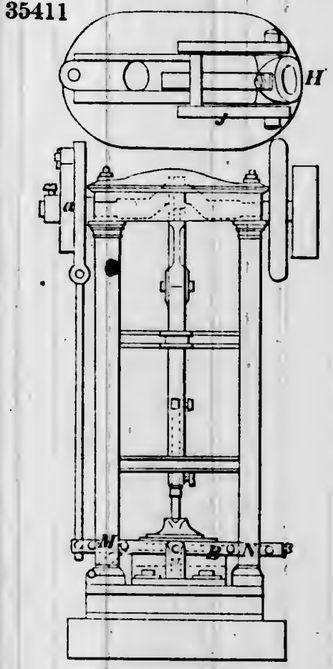
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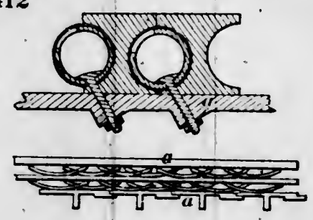
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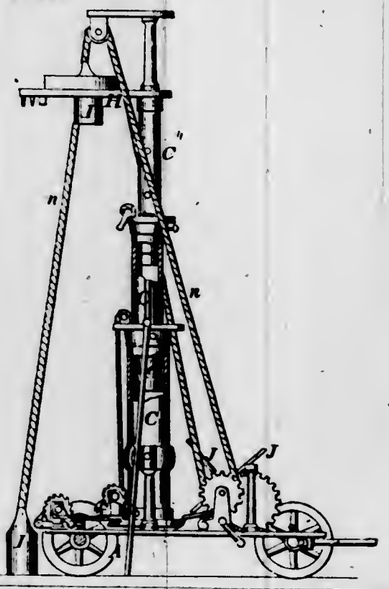
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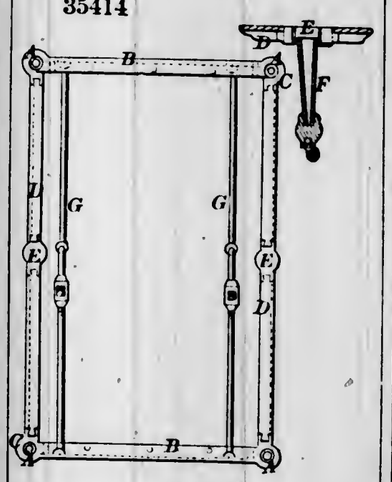
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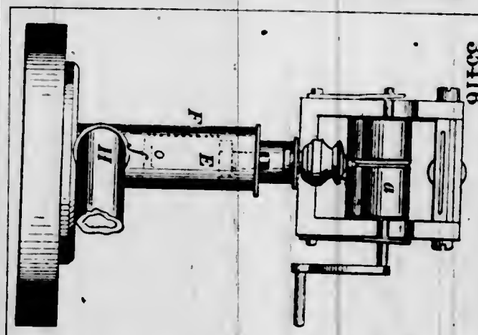
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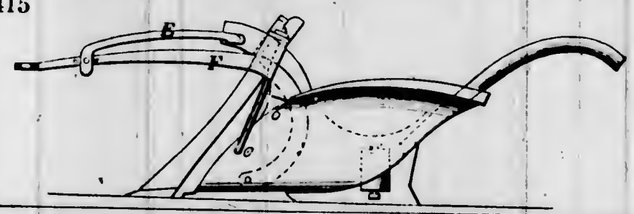
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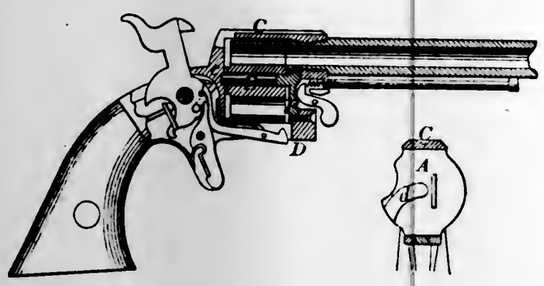
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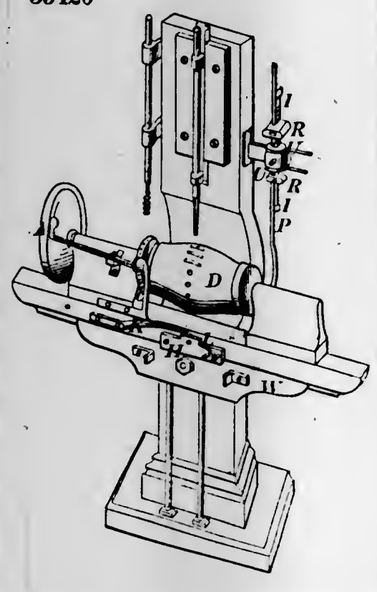
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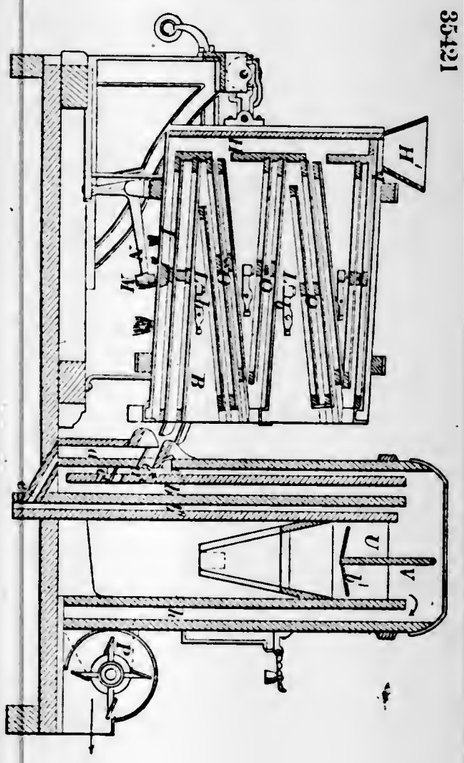
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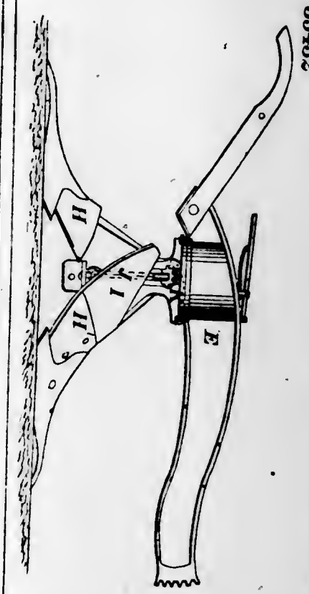
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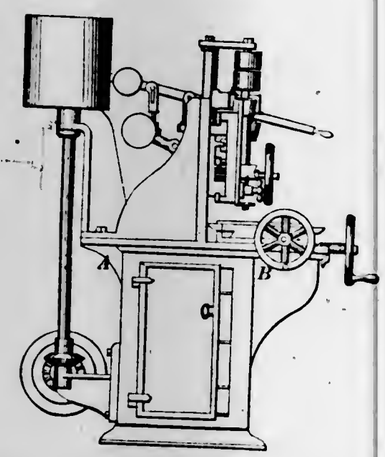
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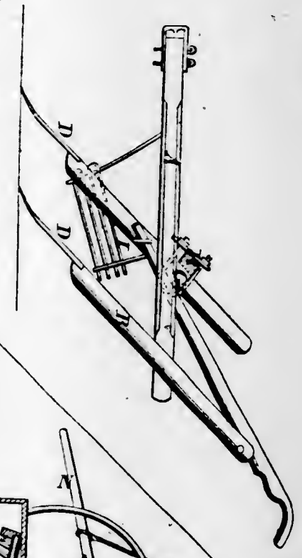
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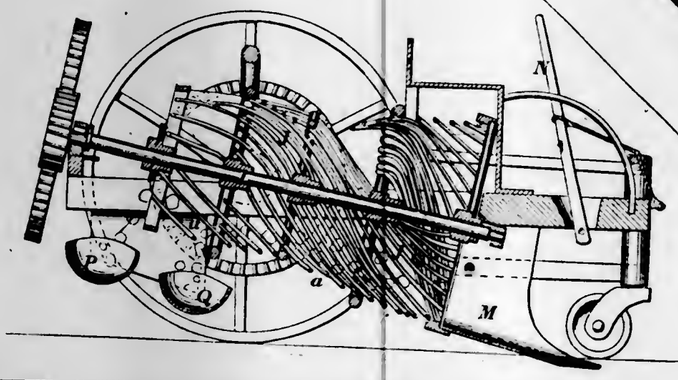
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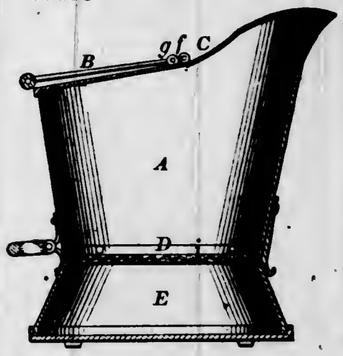
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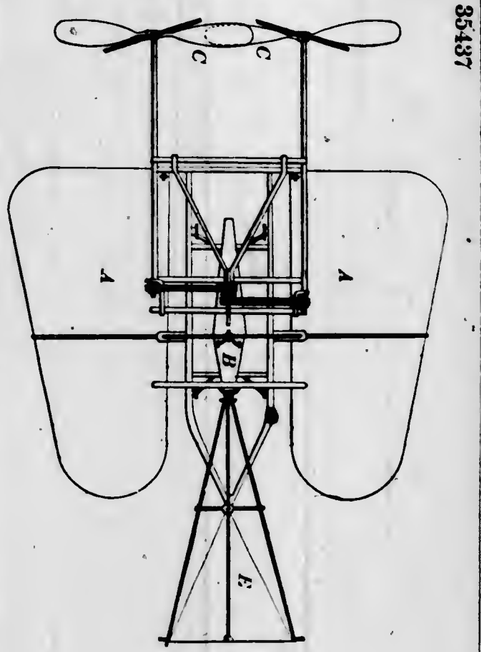
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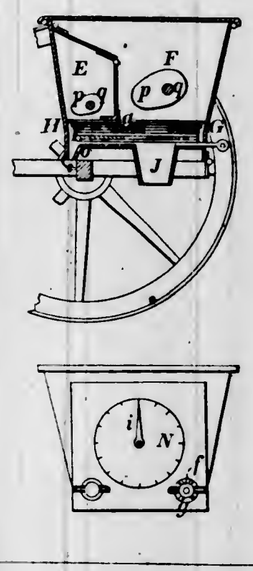
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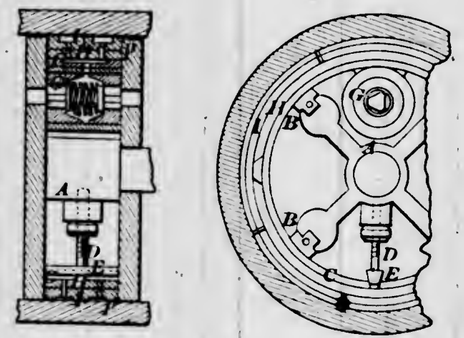
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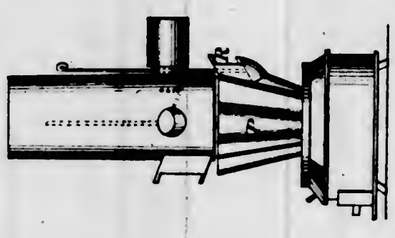
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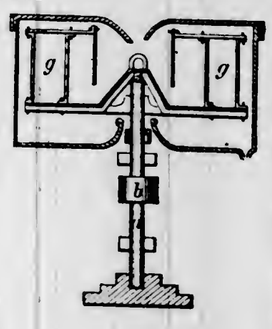
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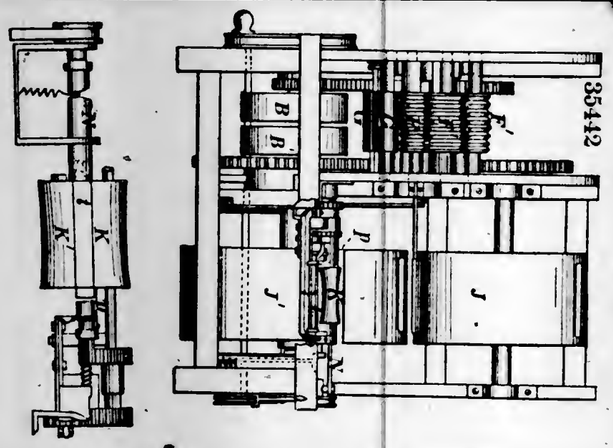
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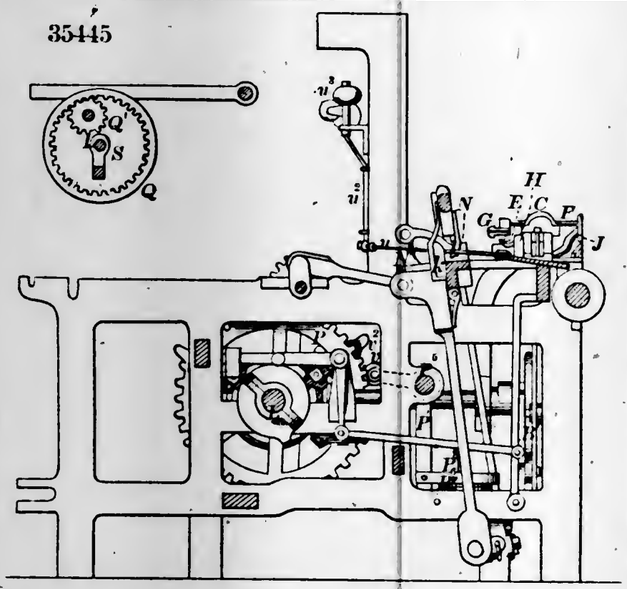
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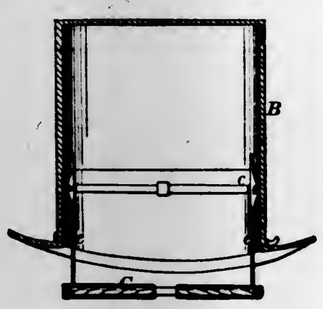
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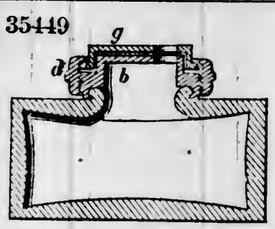
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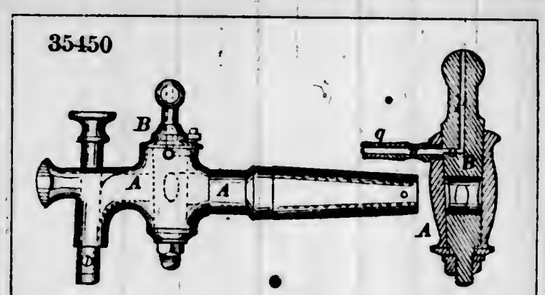
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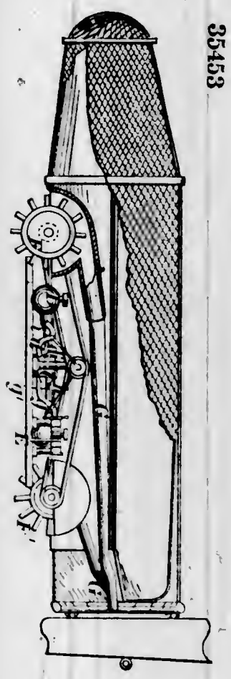
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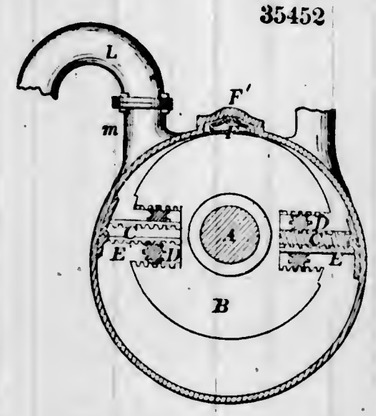
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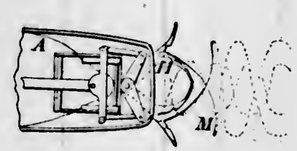
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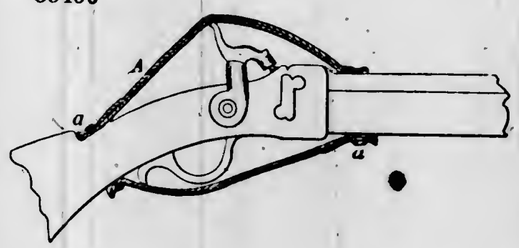
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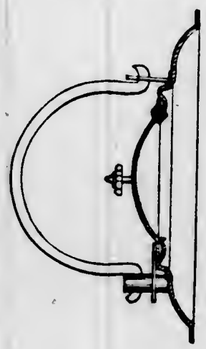
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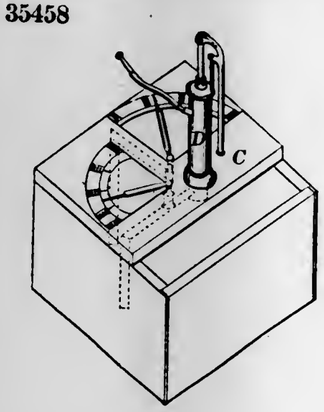
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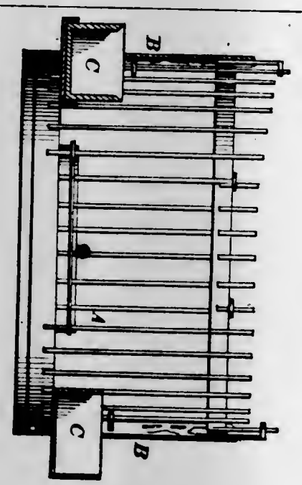
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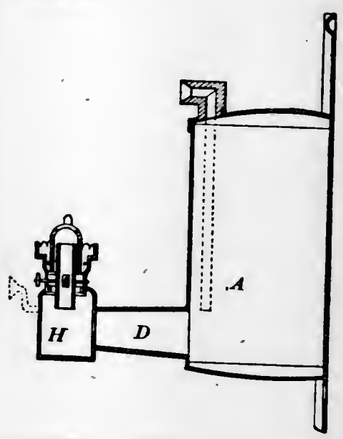
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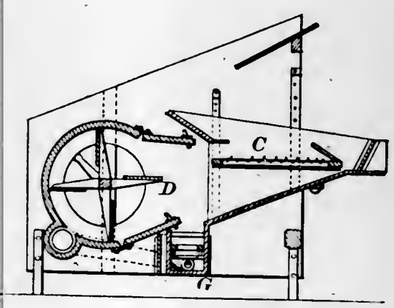
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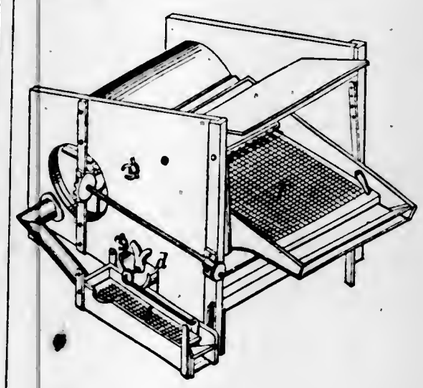
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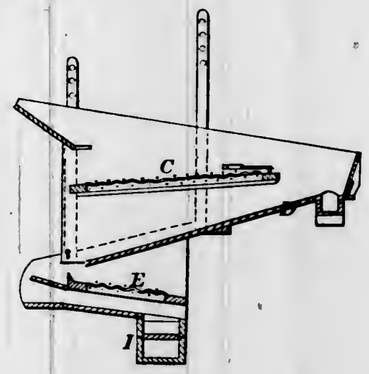
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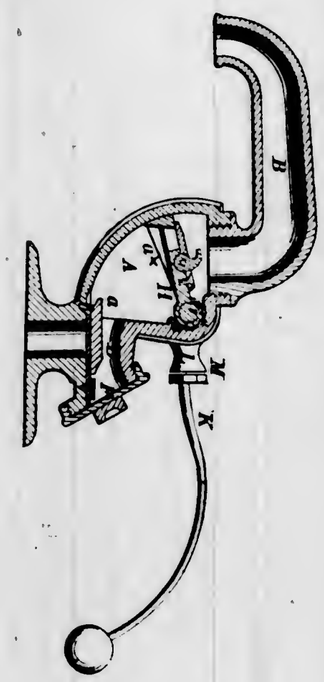
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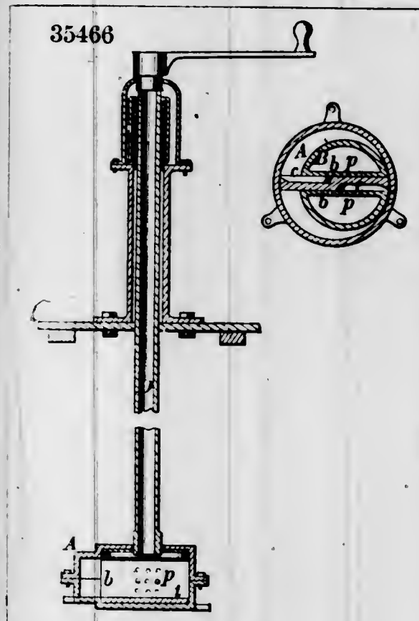
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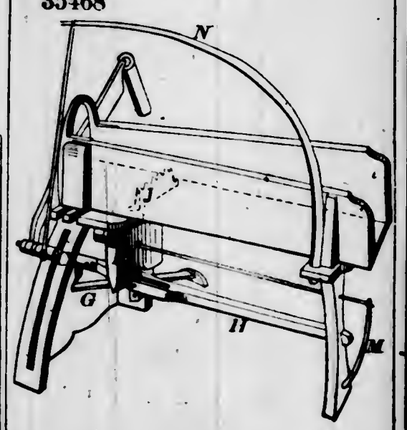
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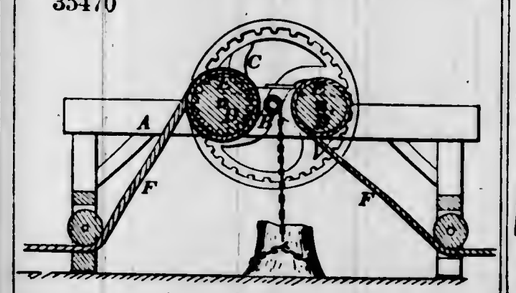
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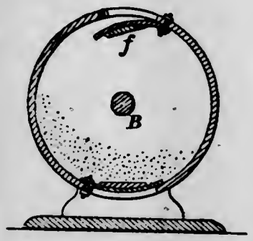
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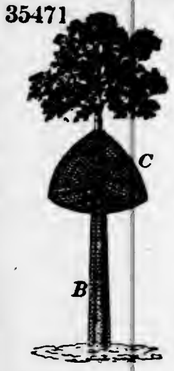
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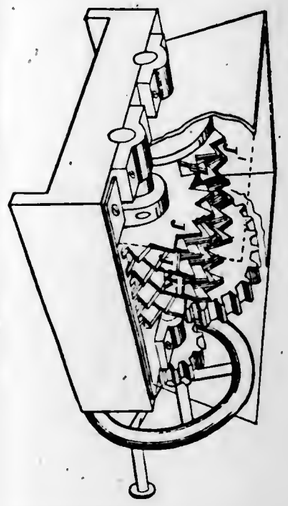
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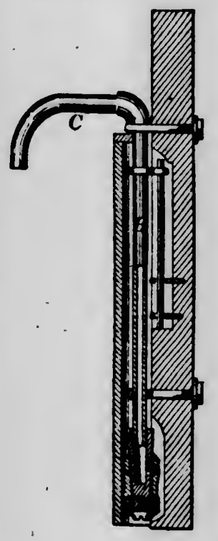
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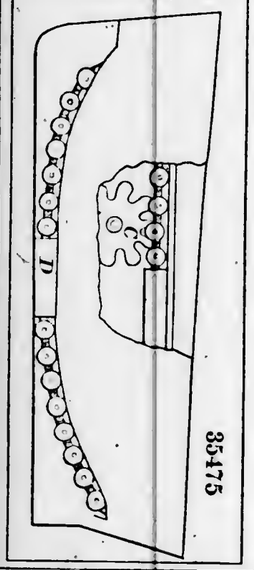
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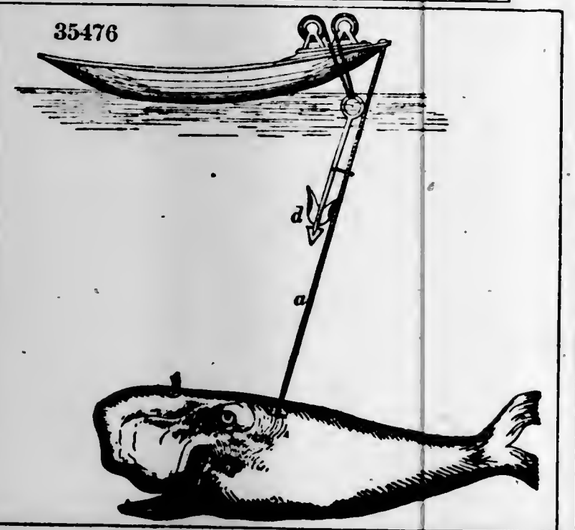
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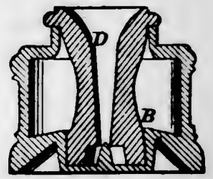
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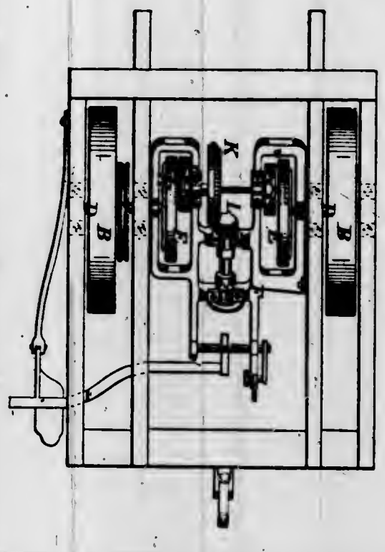
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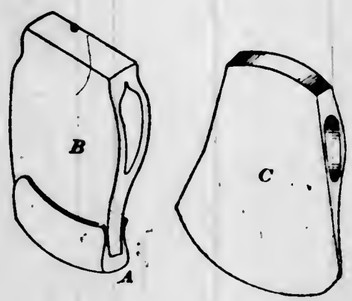
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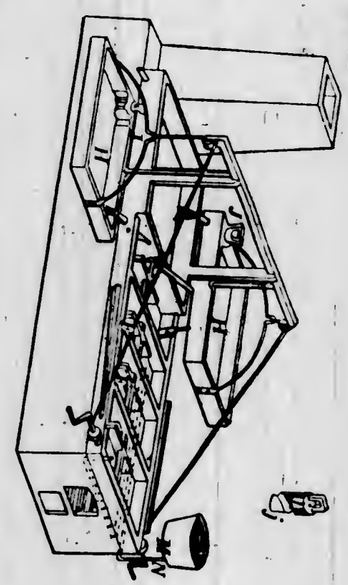
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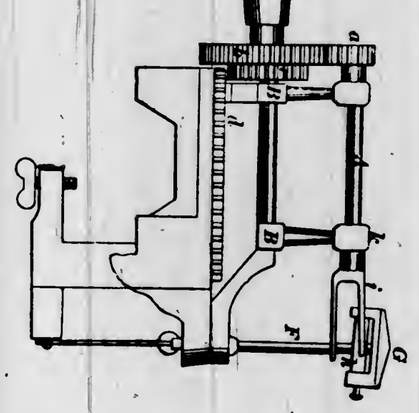
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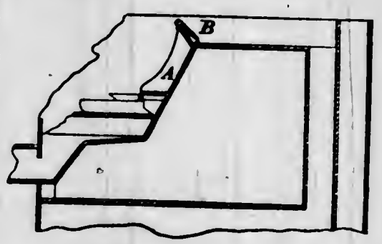
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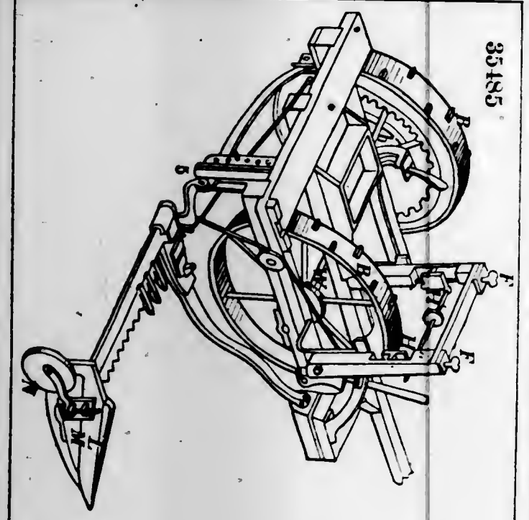
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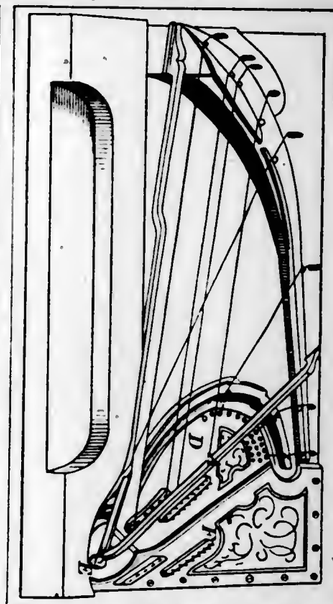
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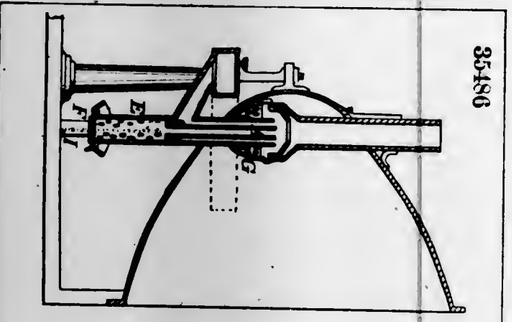
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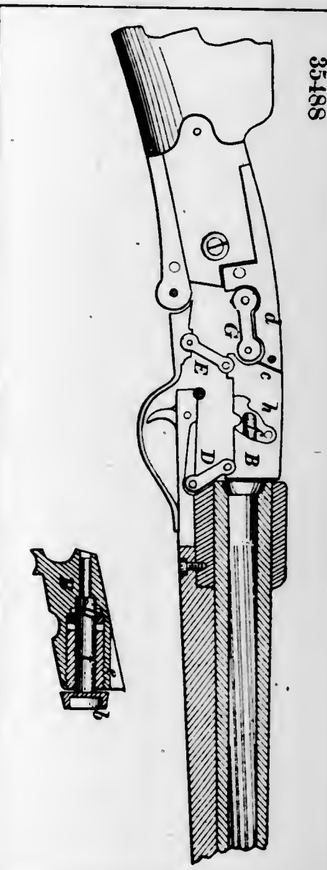
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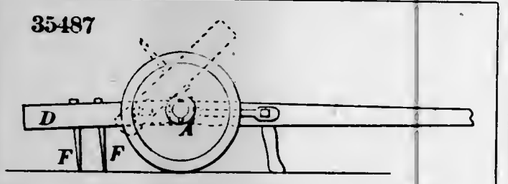
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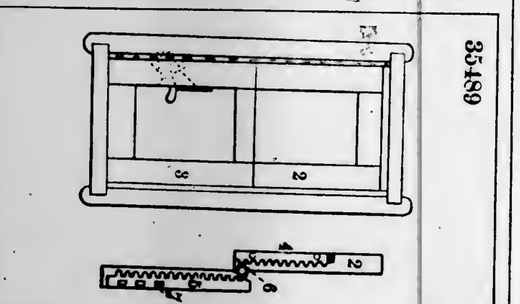
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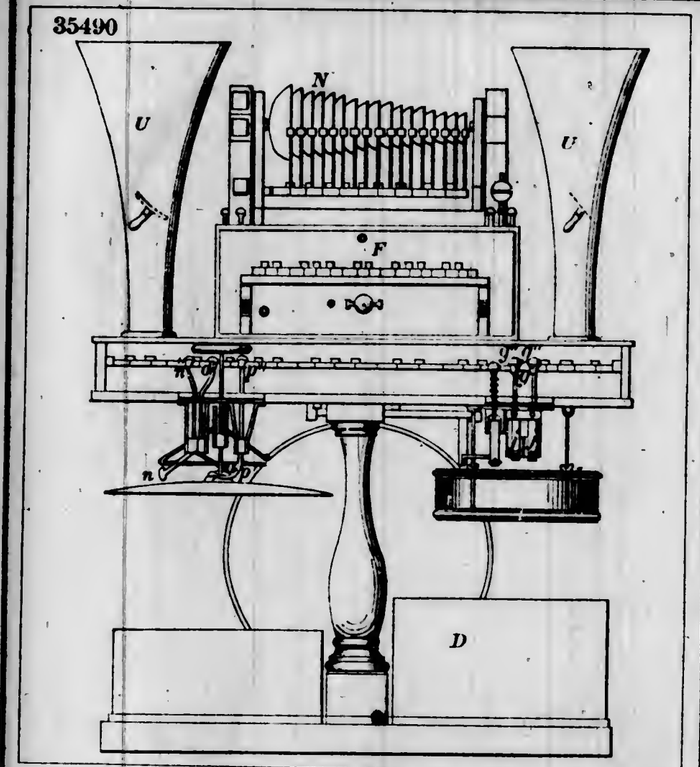
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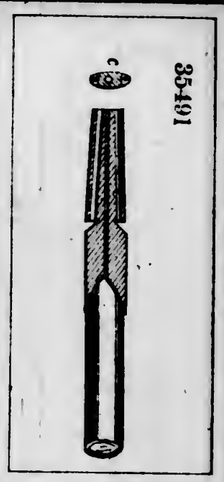
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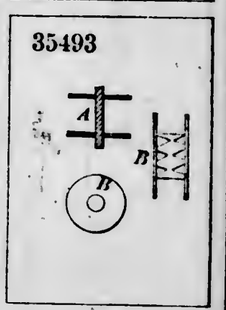
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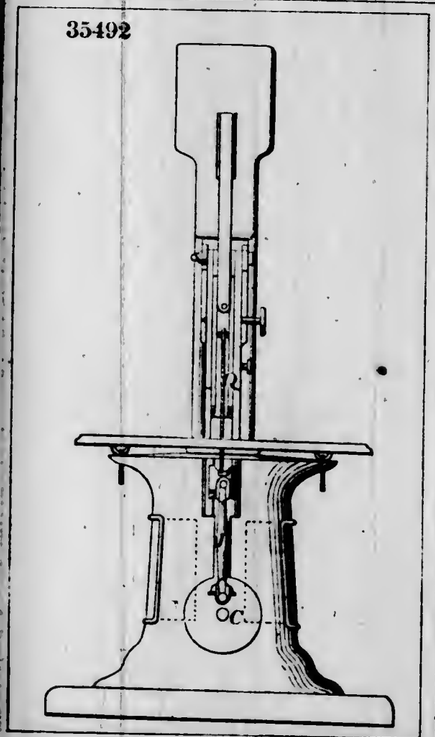
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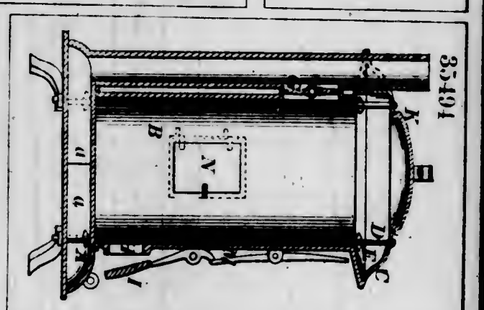
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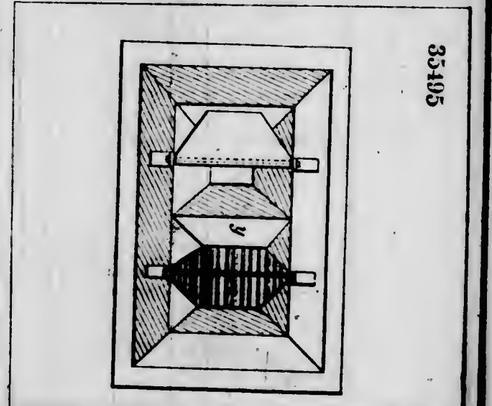
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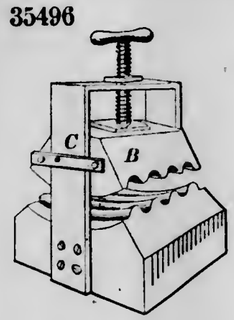
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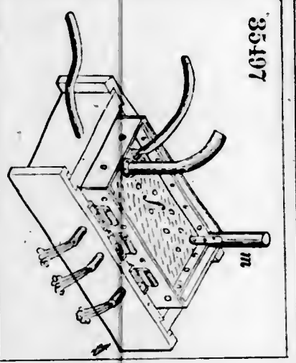
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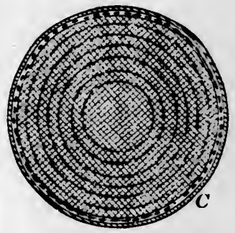
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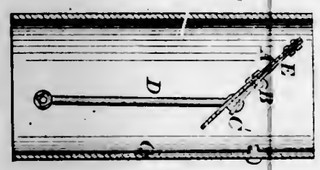
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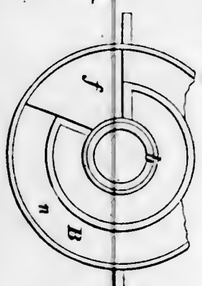


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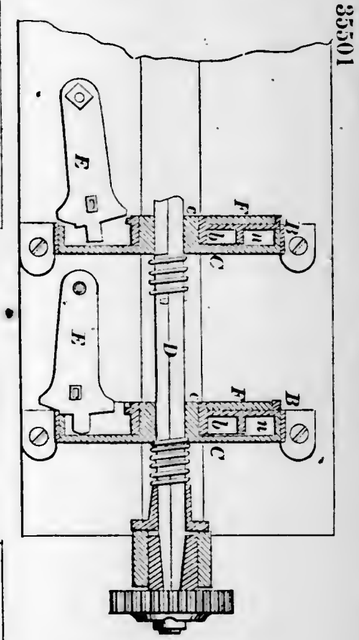


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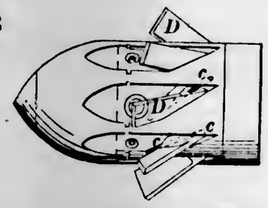




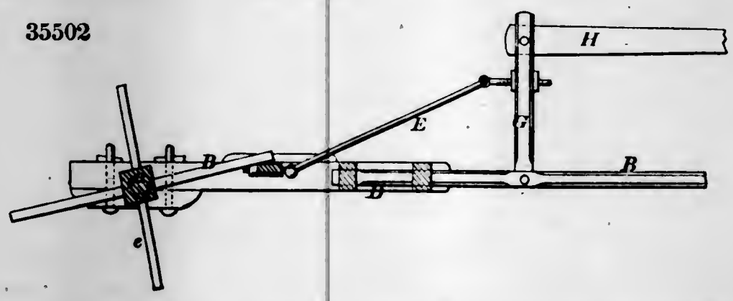
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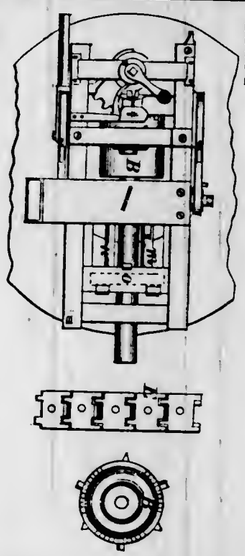
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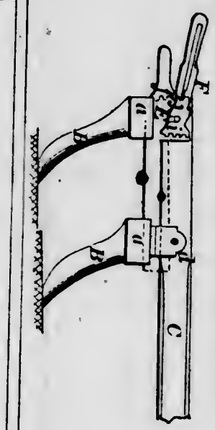
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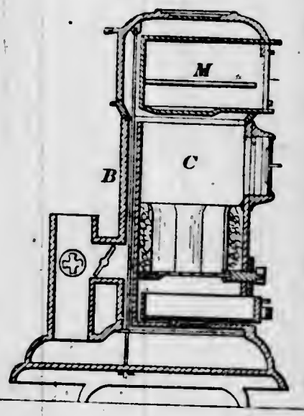
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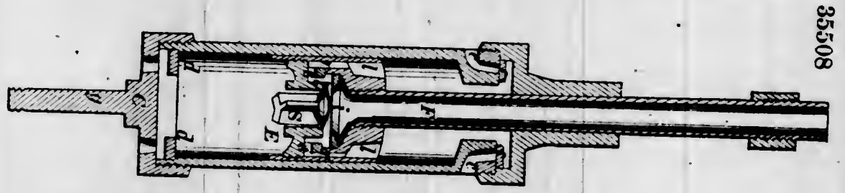
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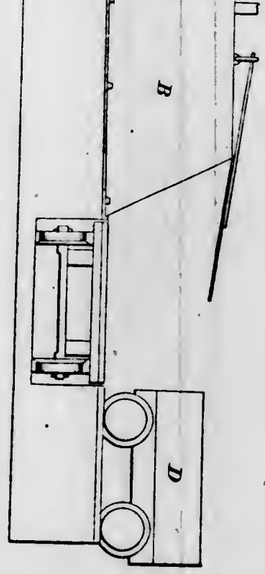
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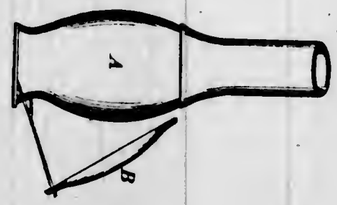
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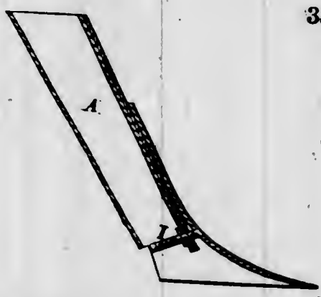
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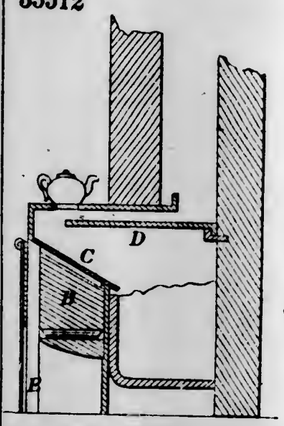
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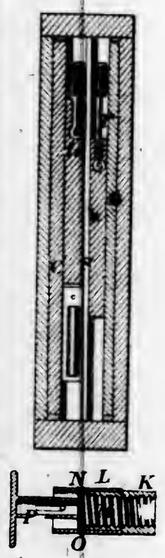
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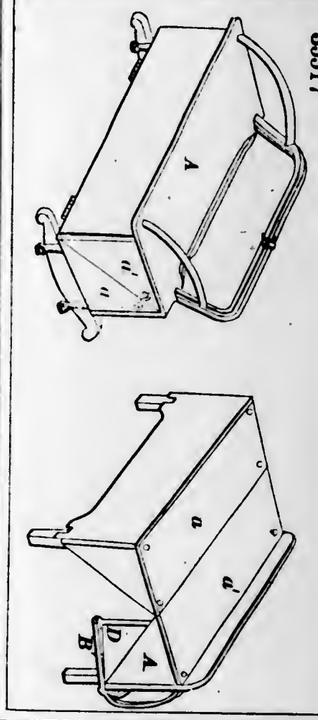
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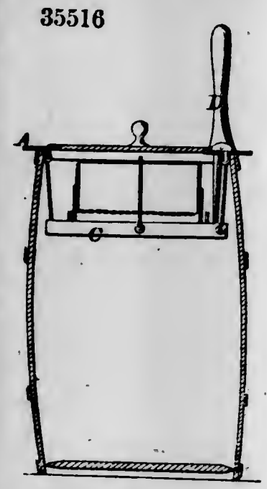
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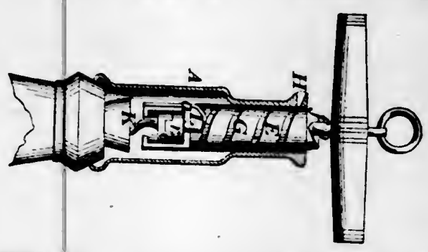
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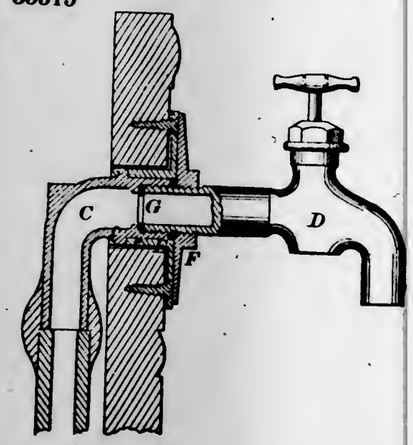
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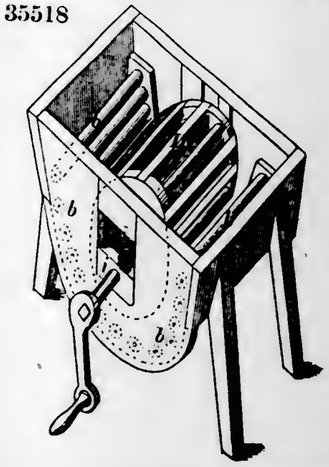
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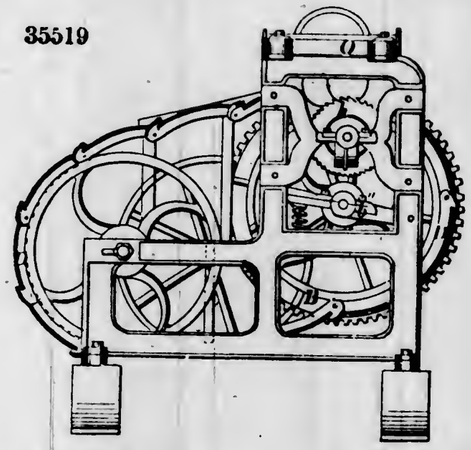
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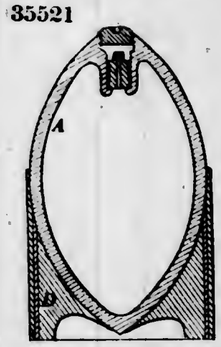
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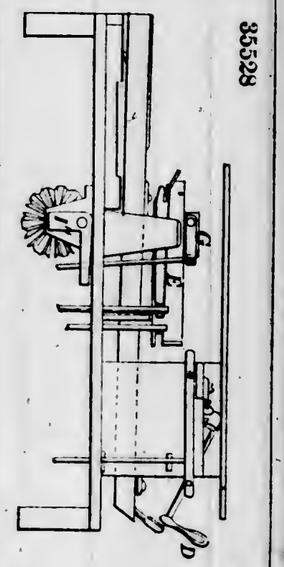
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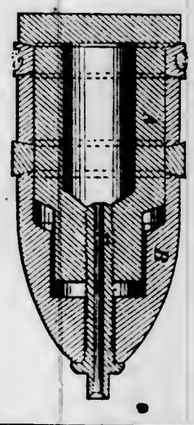
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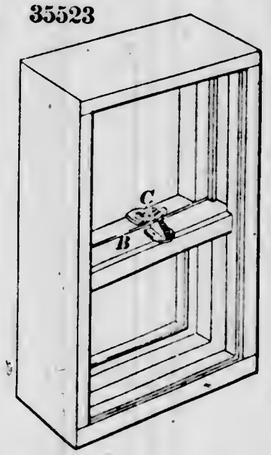
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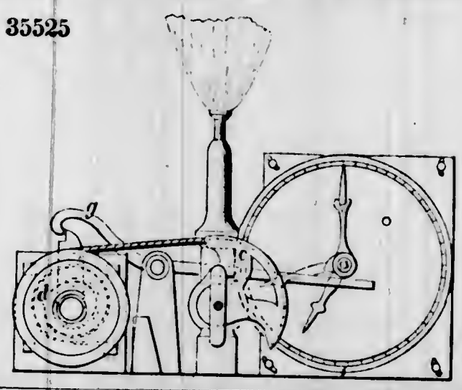
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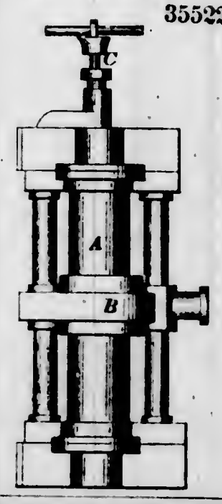
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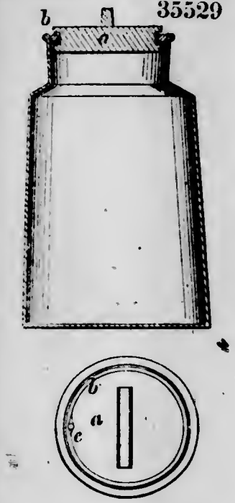


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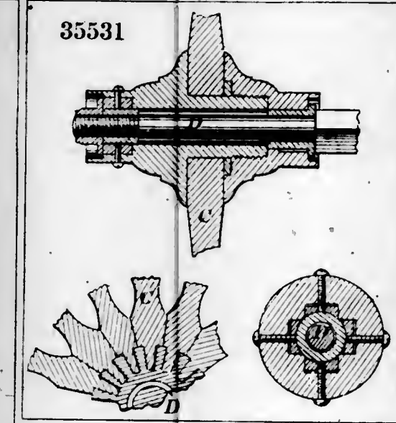
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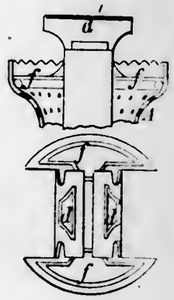
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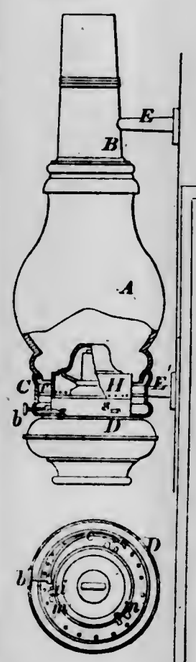
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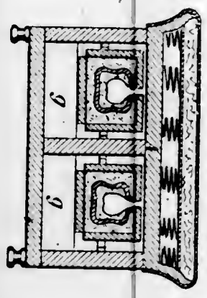
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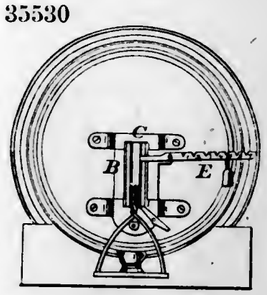
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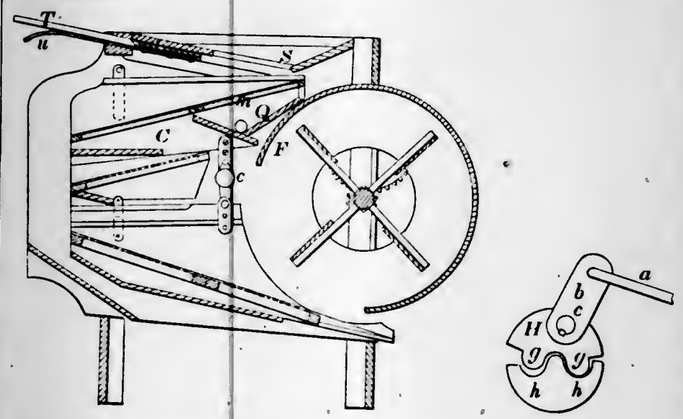
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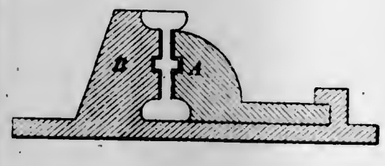
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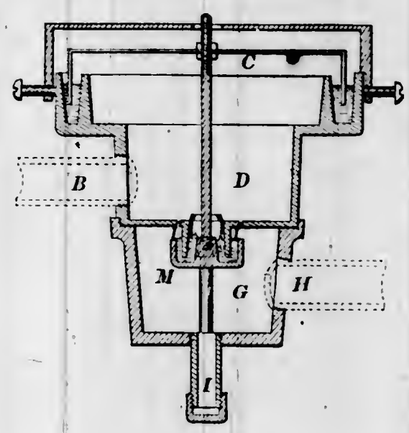
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LETTERS from Troy N. Y.

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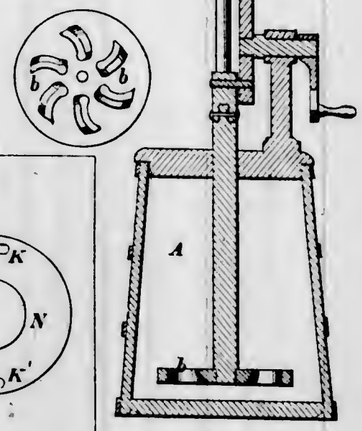
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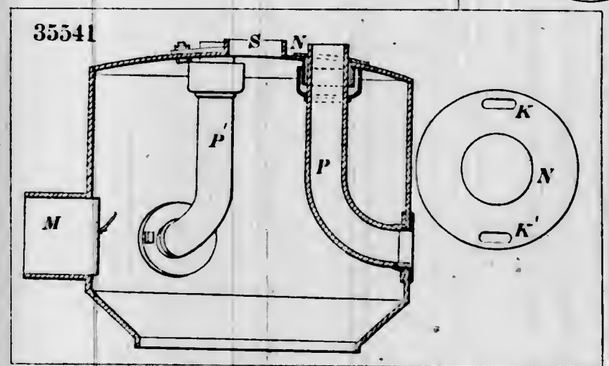
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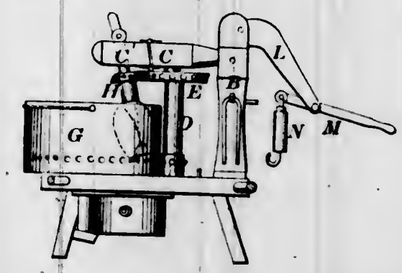
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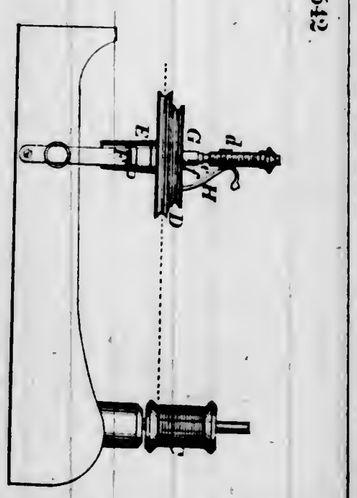
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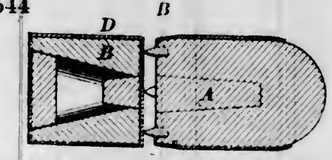
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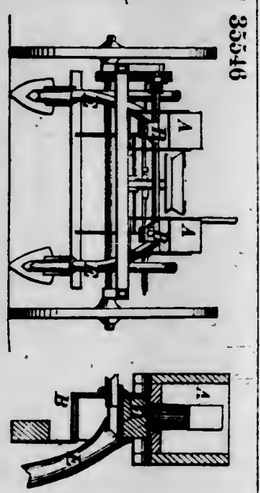
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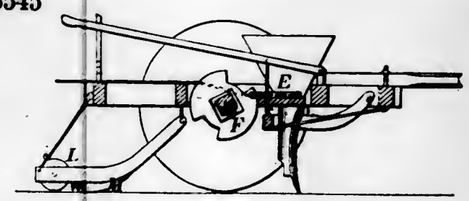
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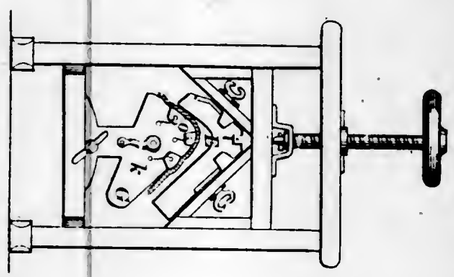
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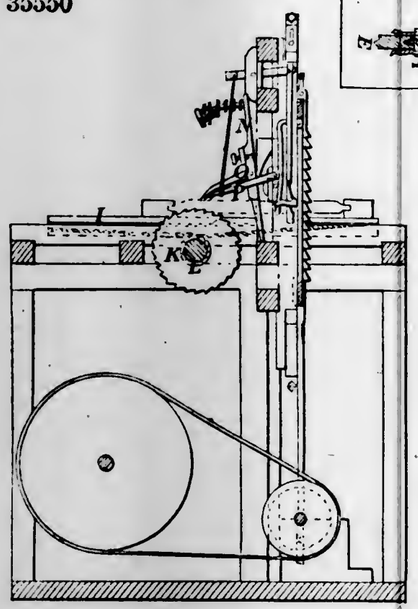
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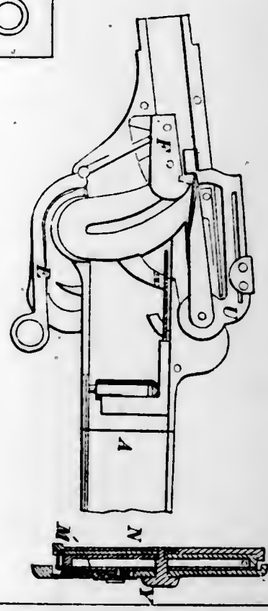
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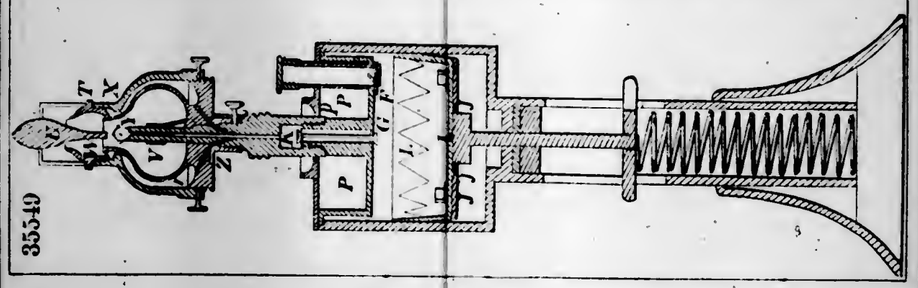
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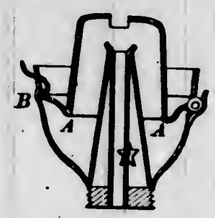
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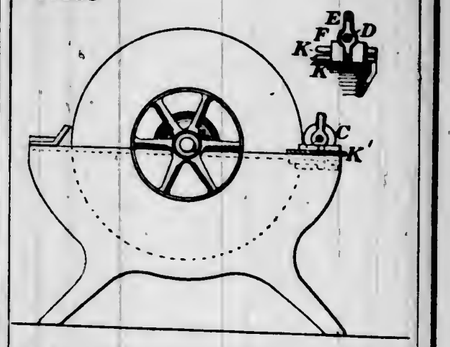
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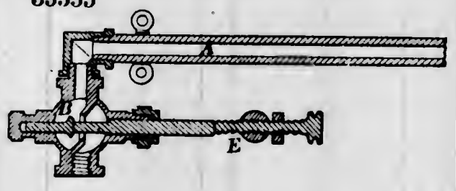
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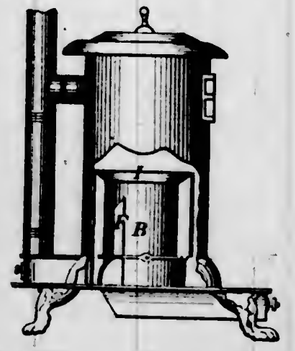
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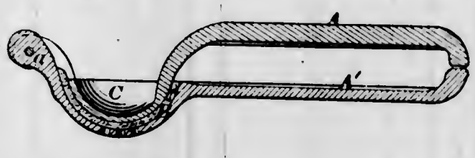
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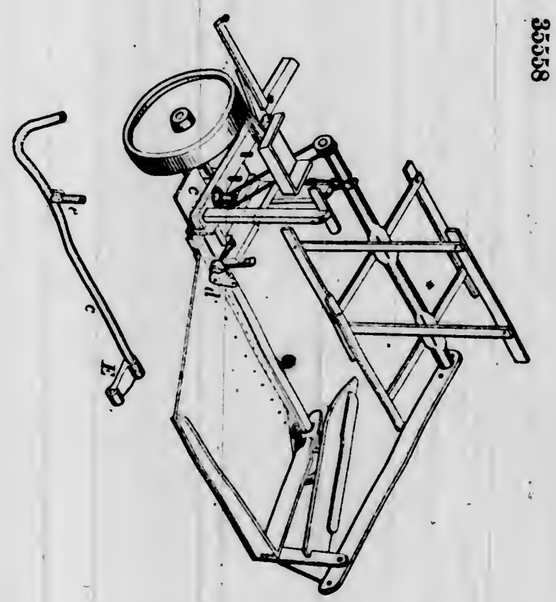
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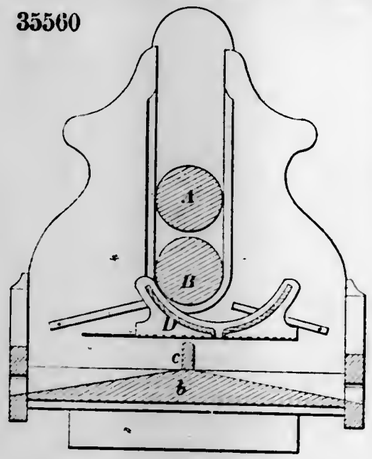
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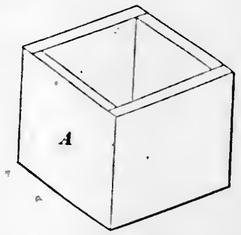
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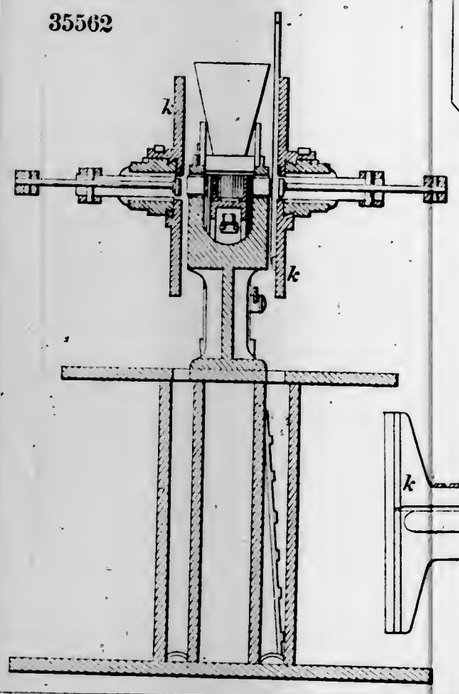
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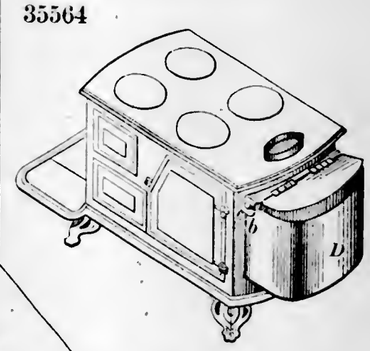
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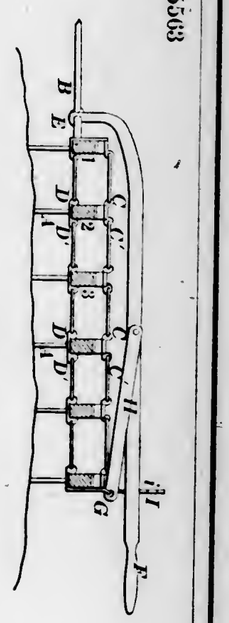
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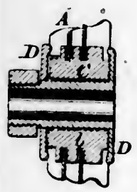
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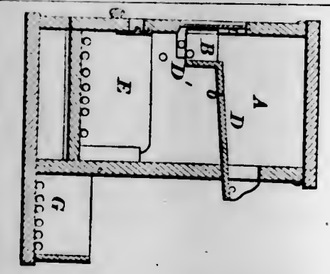
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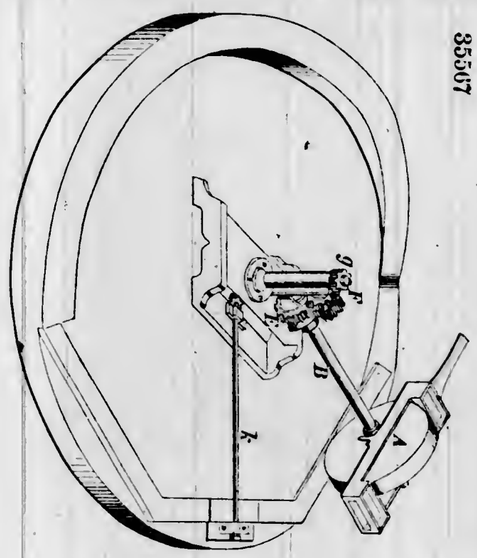
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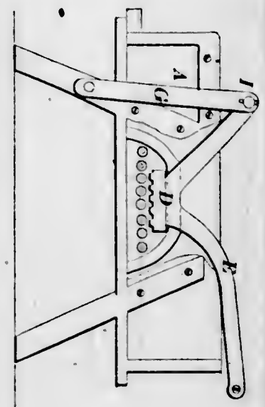
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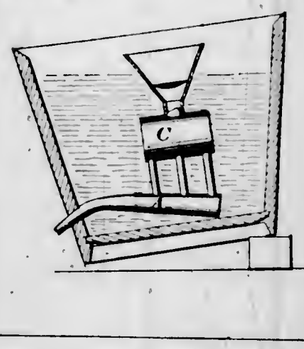
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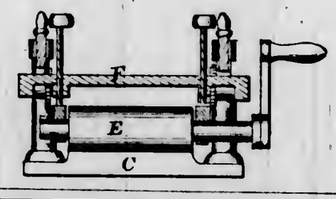
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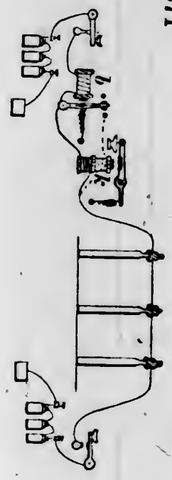
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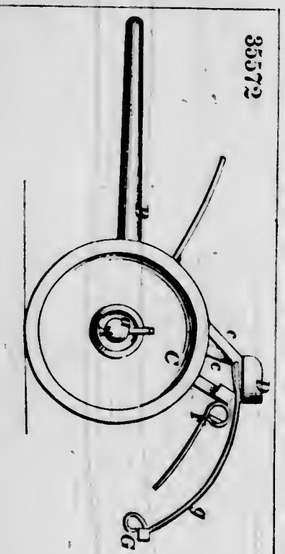
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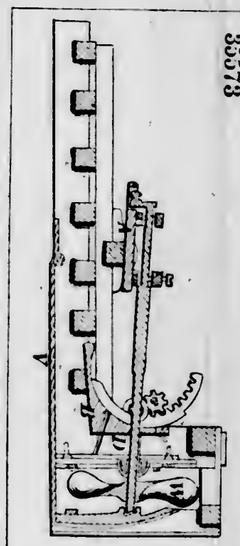
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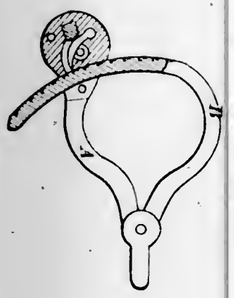
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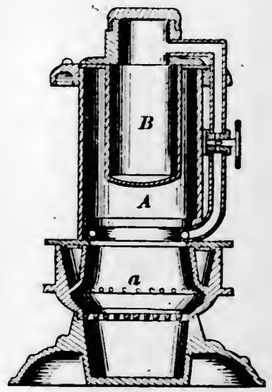
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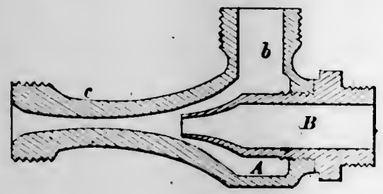


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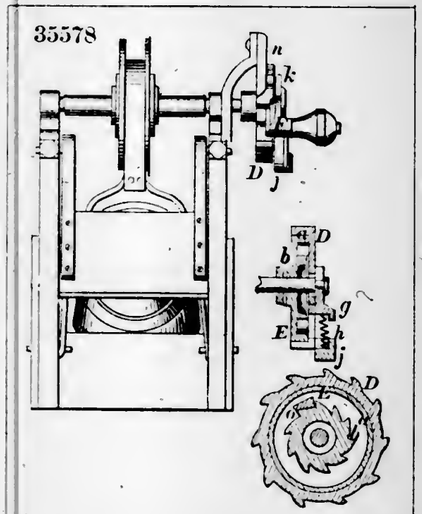


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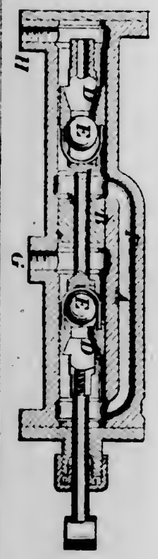




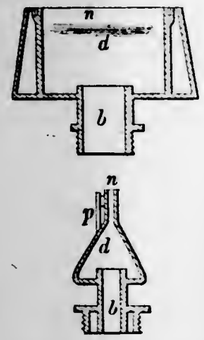
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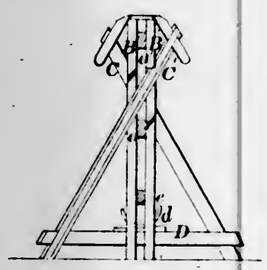
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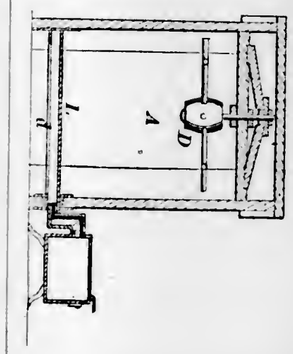
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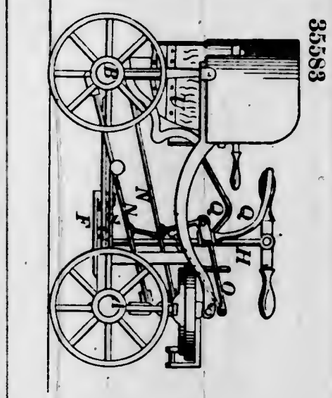
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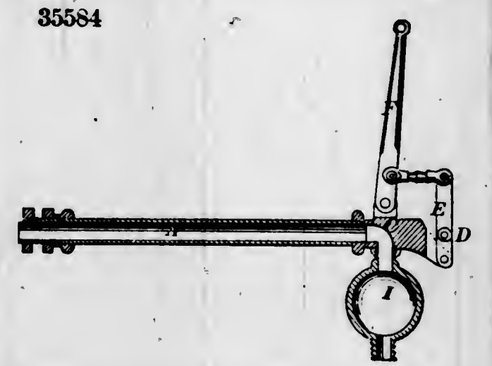


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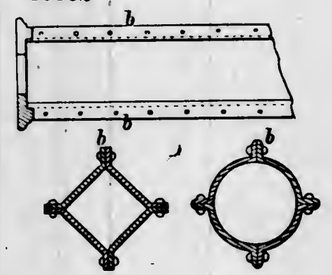




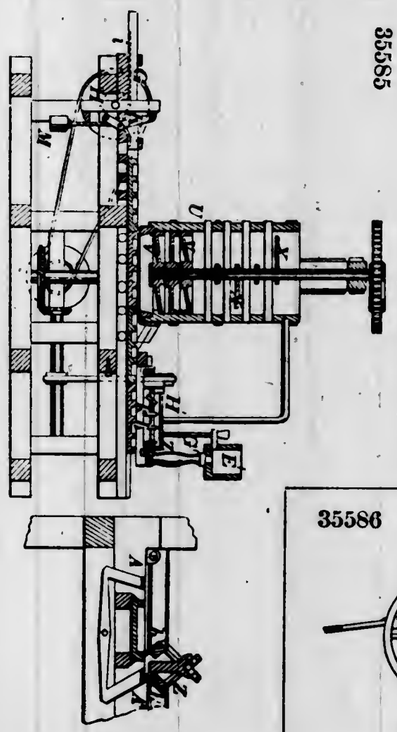
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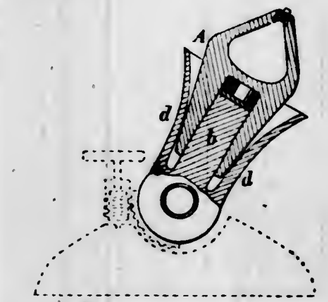
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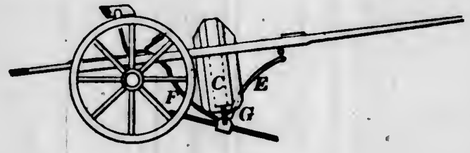
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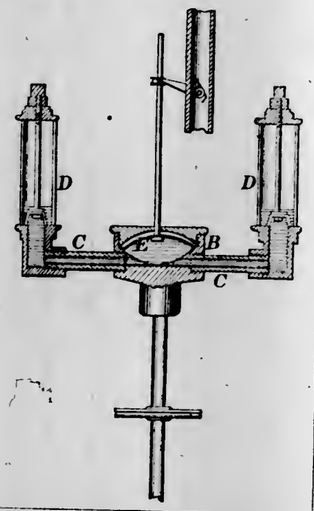
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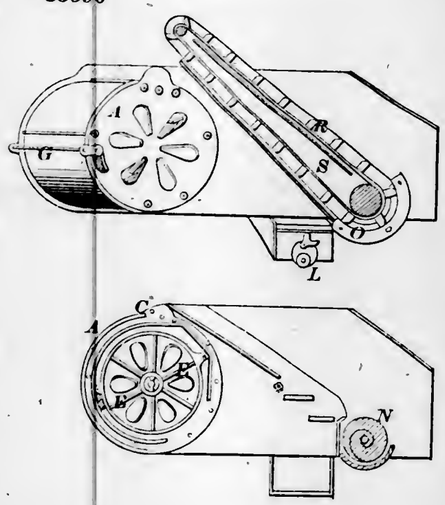
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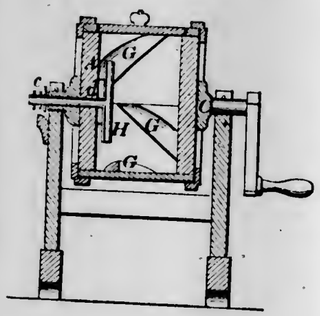
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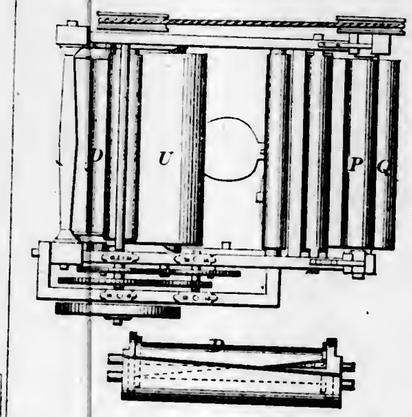
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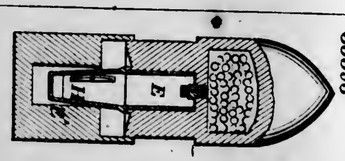
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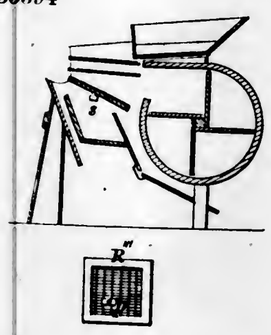
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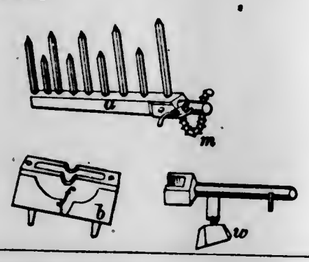
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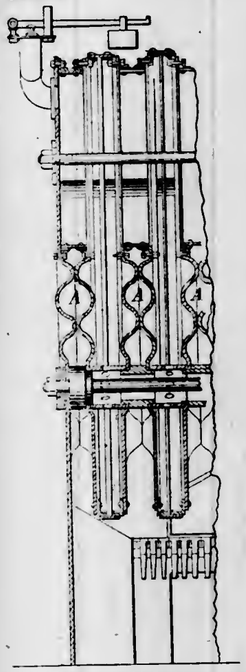
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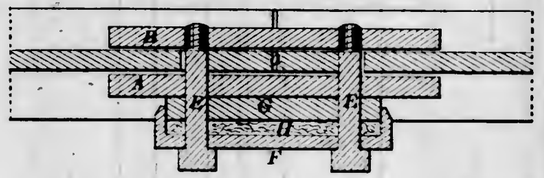
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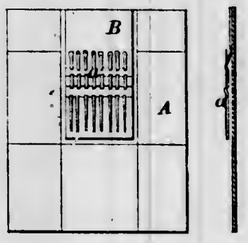
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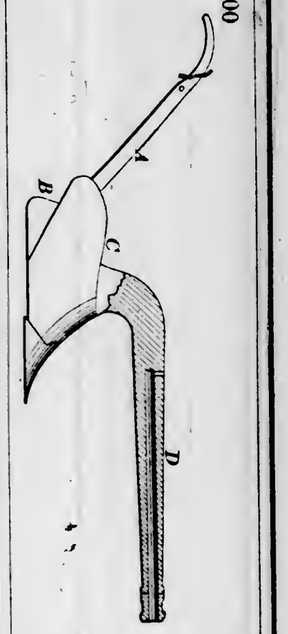
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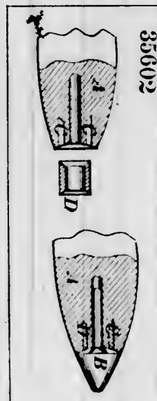
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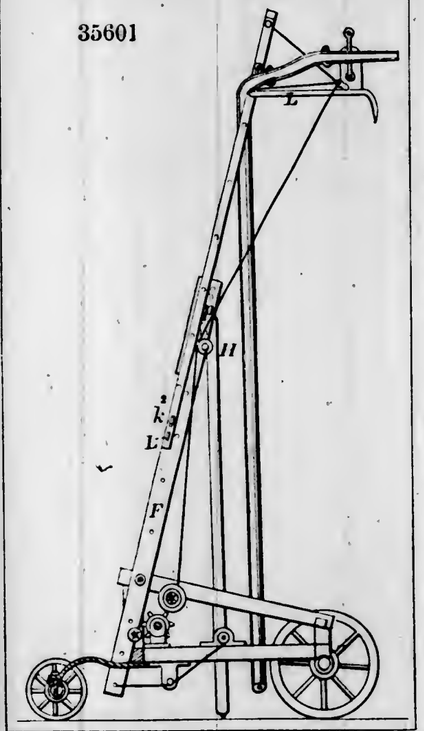
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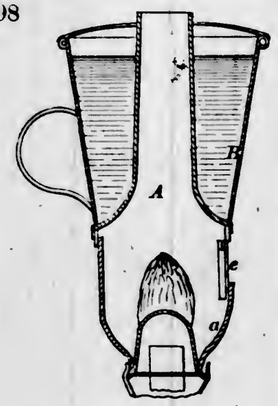
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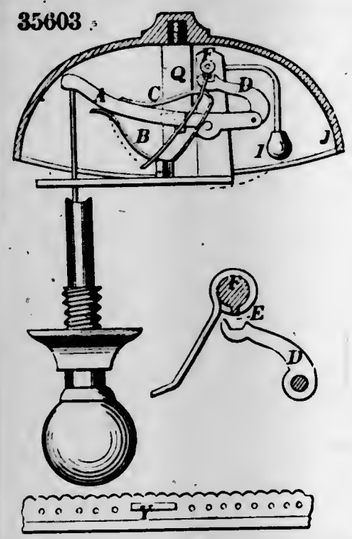
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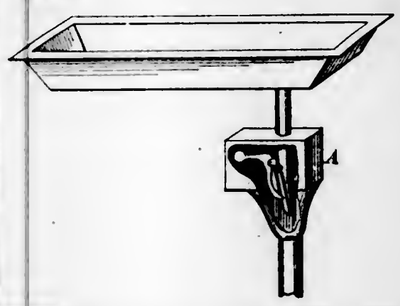
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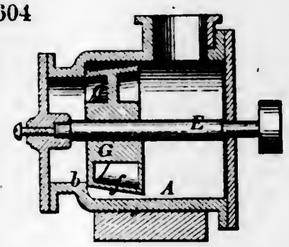
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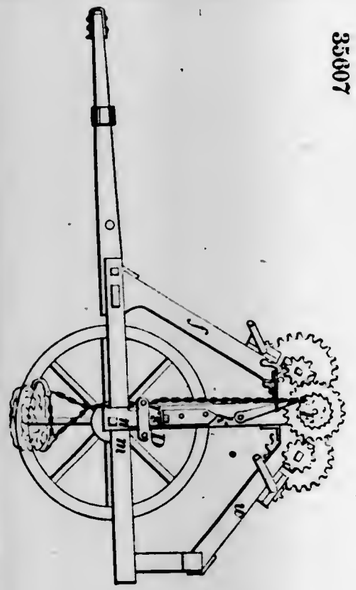
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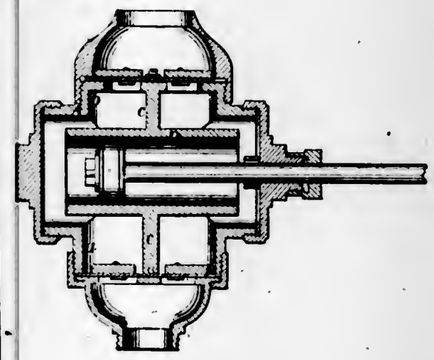
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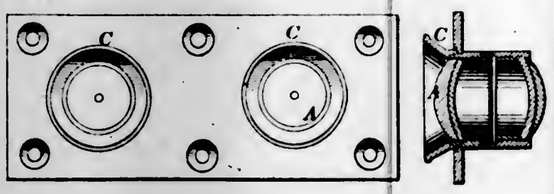
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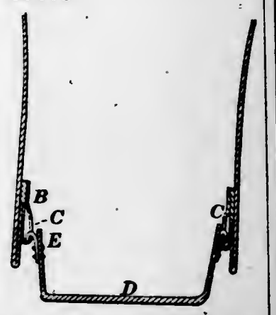
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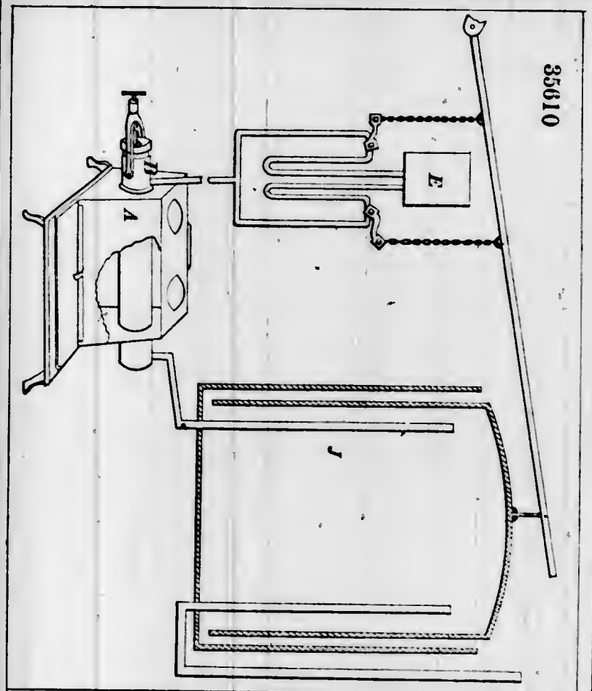
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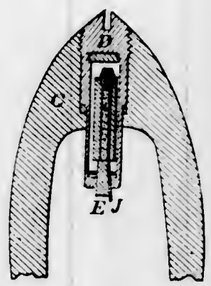
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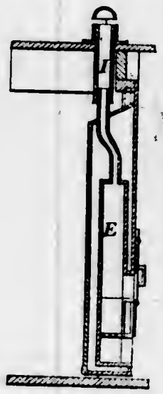
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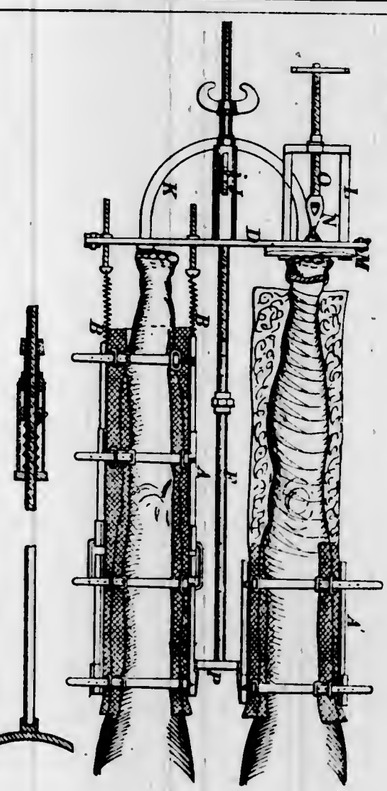
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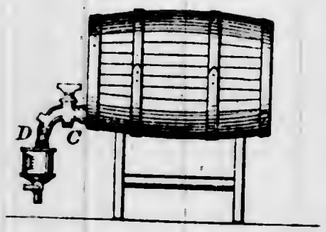
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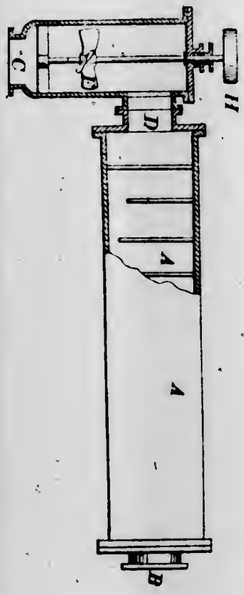
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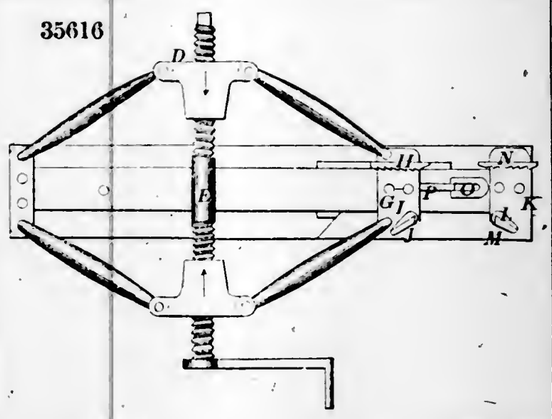
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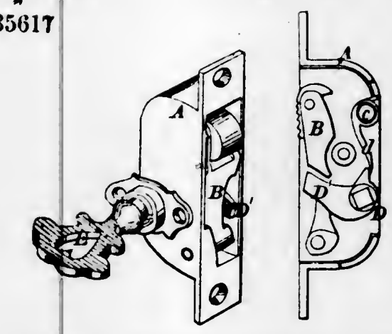
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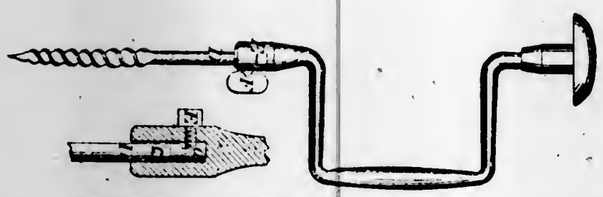
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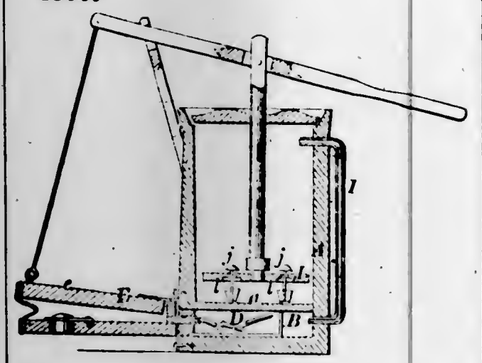
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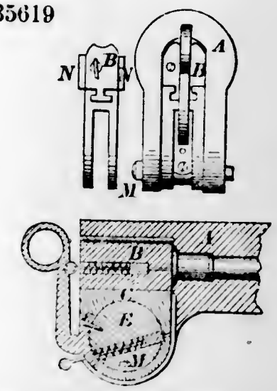
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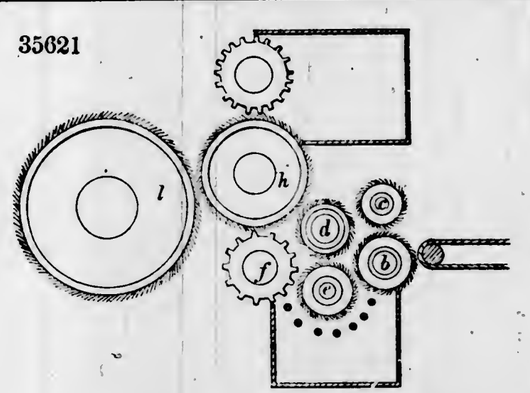
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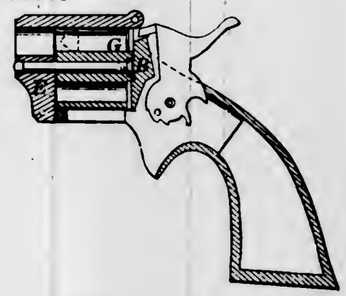
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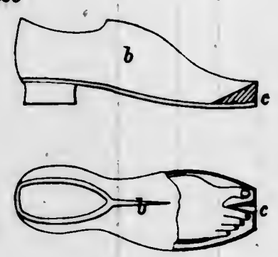
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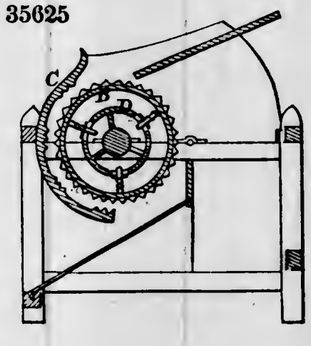
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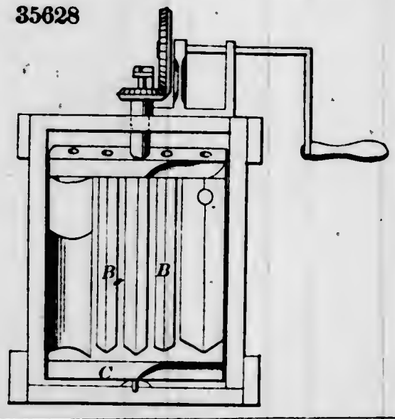
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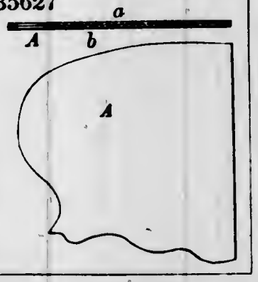
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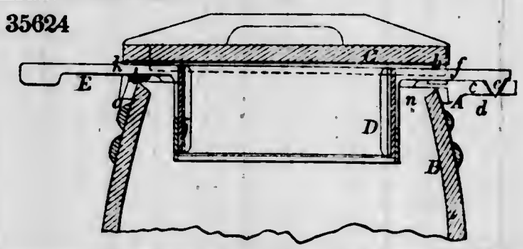
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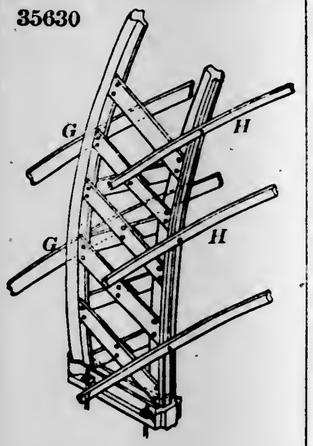
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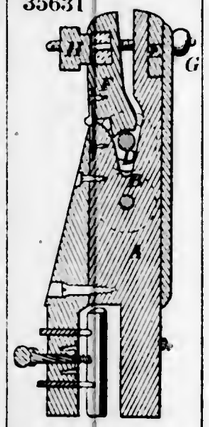
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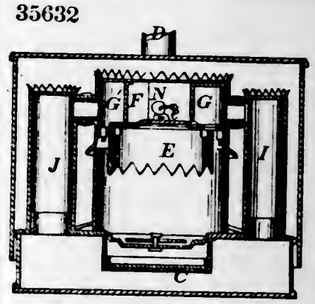
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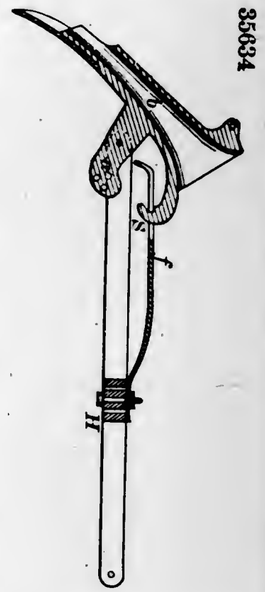
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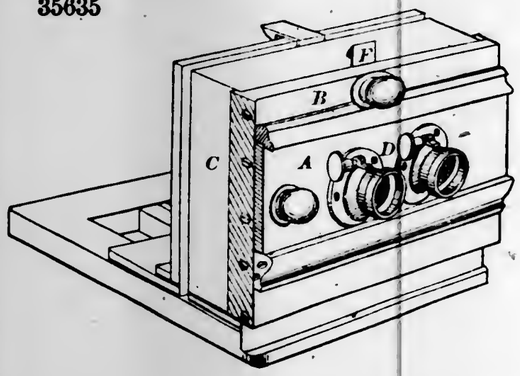
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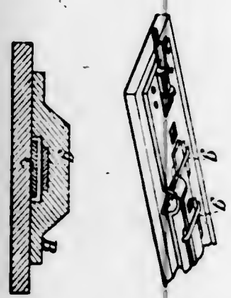
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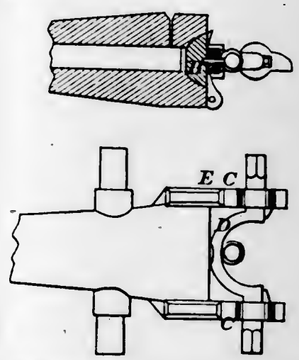
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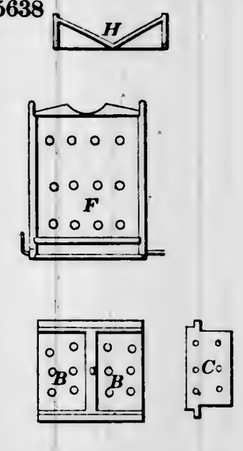
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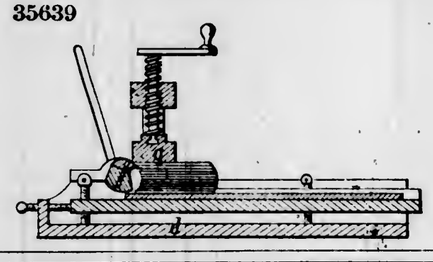
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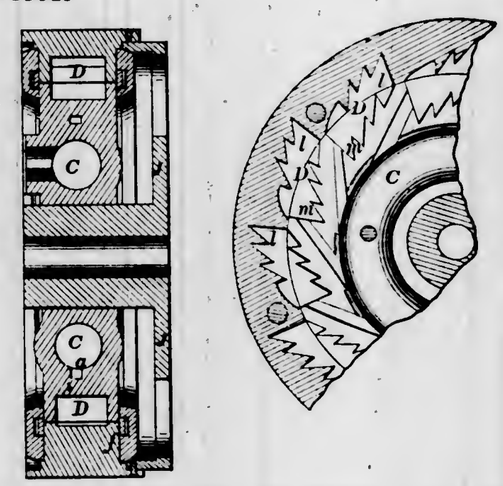
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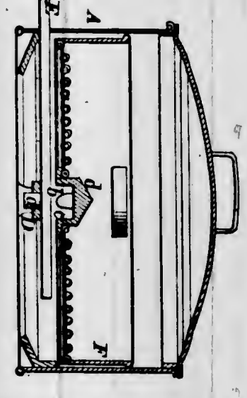
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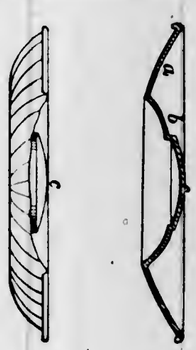
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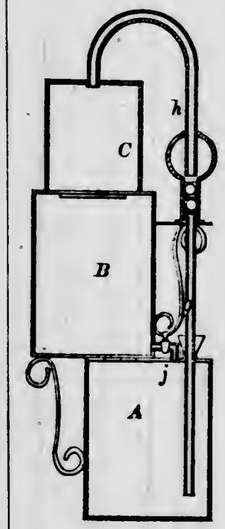
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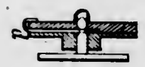
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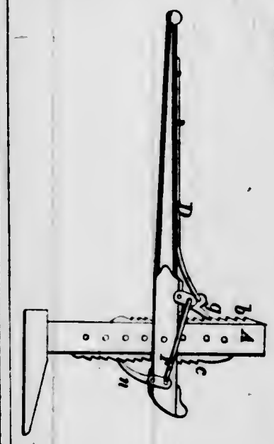
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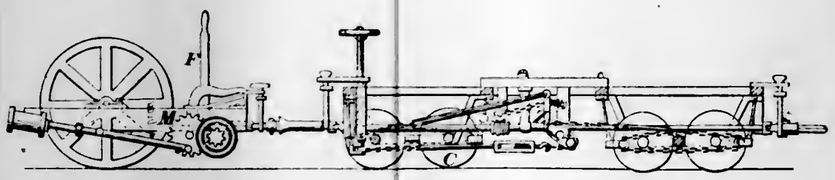
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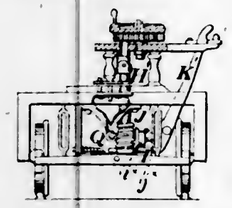


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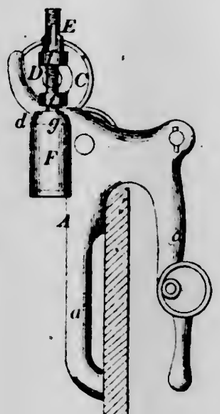


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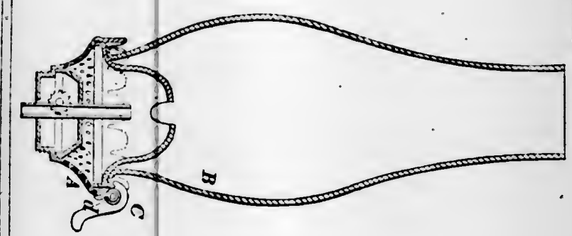




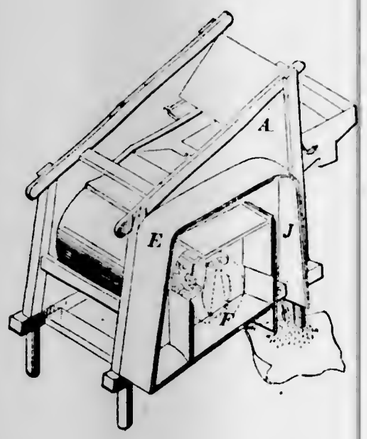
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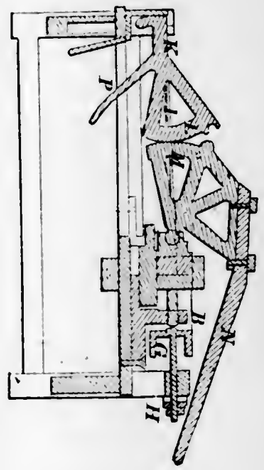
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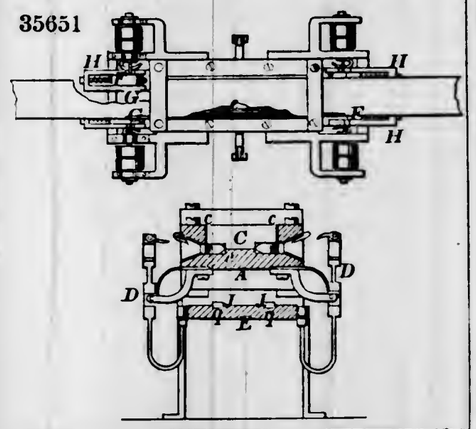
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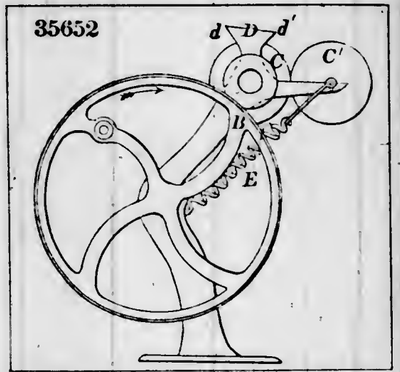
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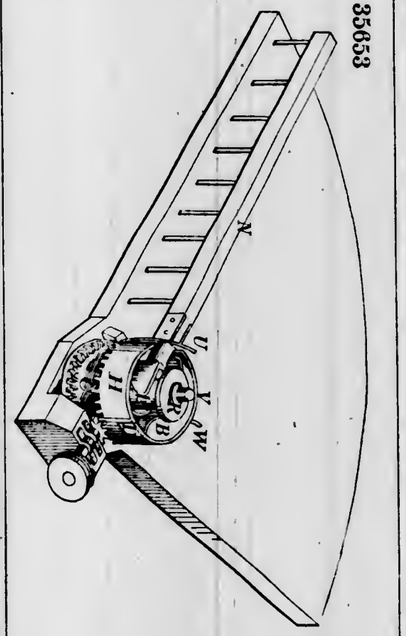
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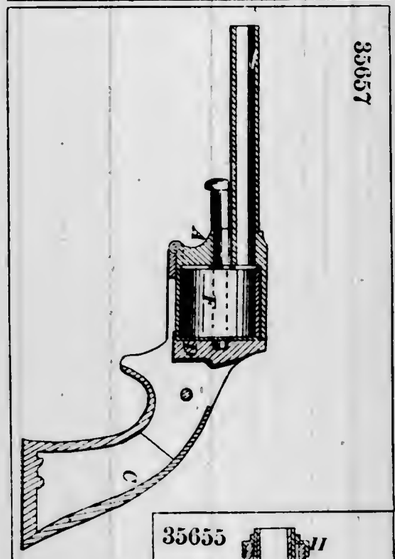
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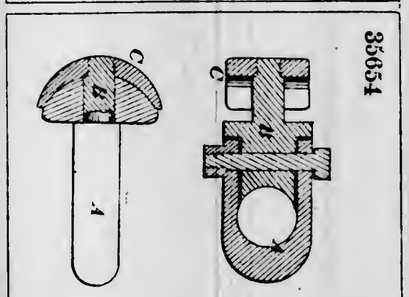
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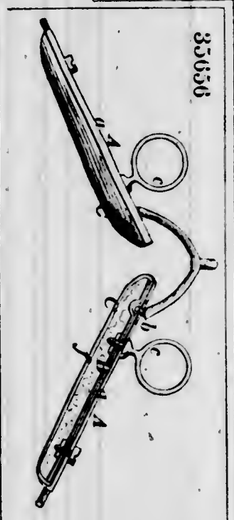
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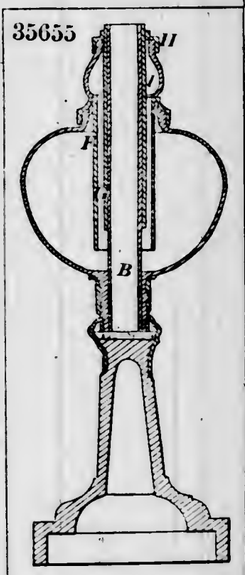
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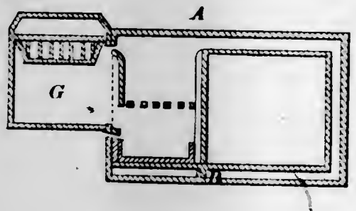
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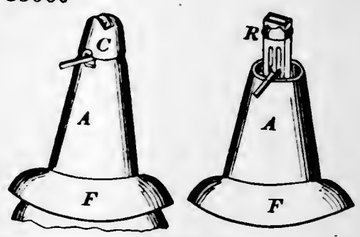
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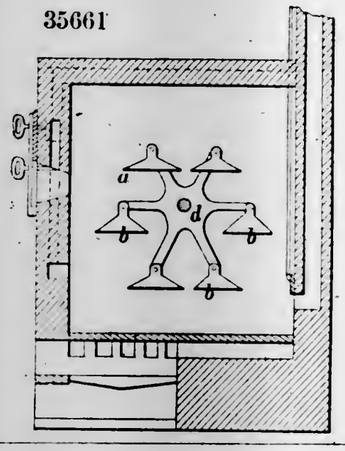
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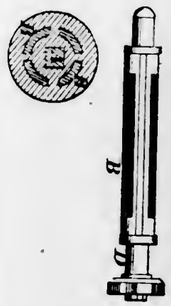
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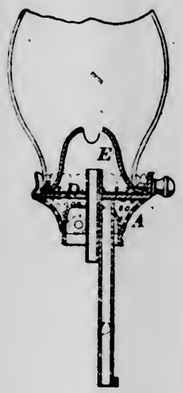
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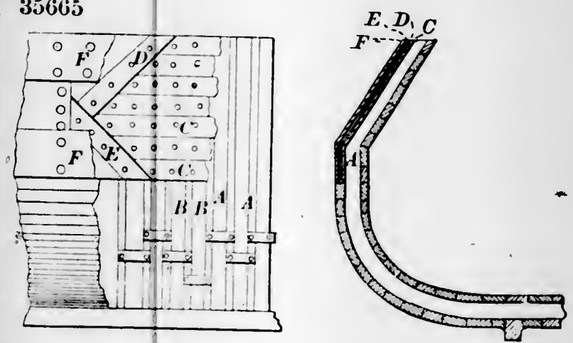
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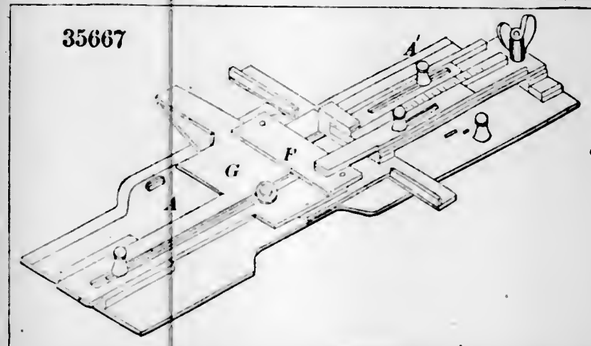
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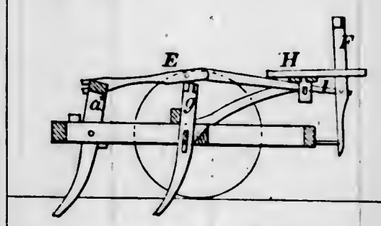
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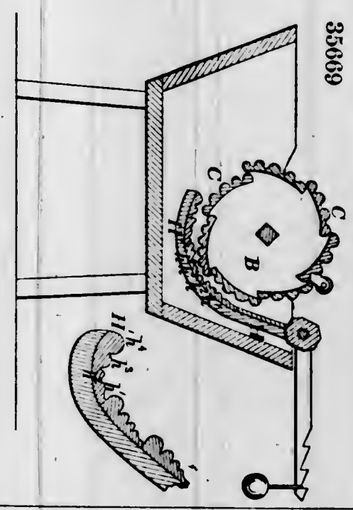
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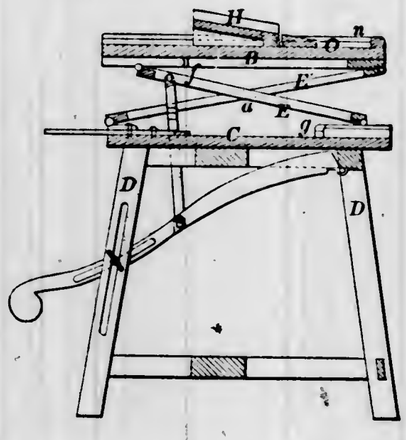
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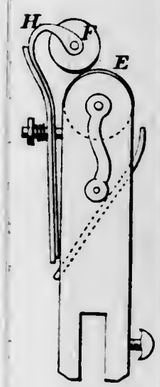
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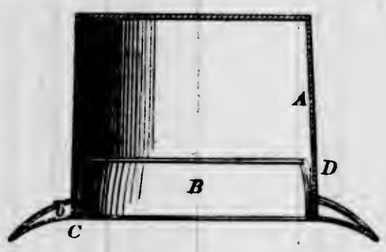
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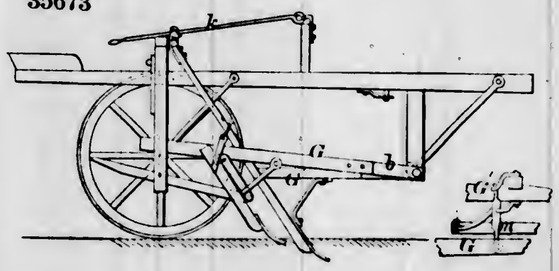
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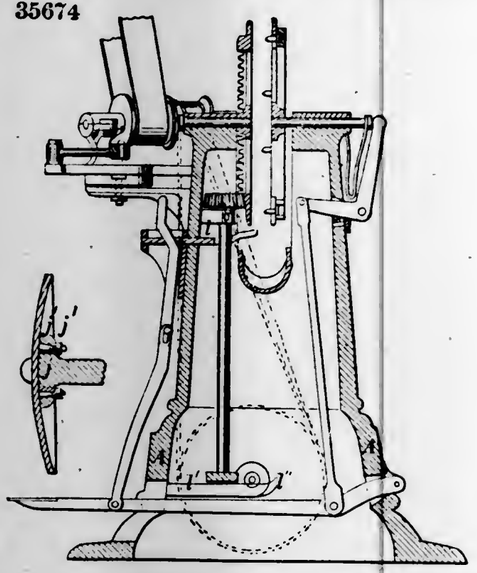
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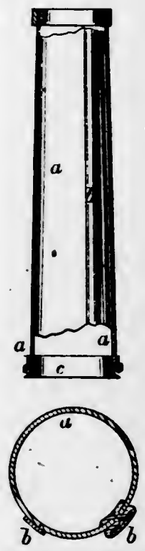
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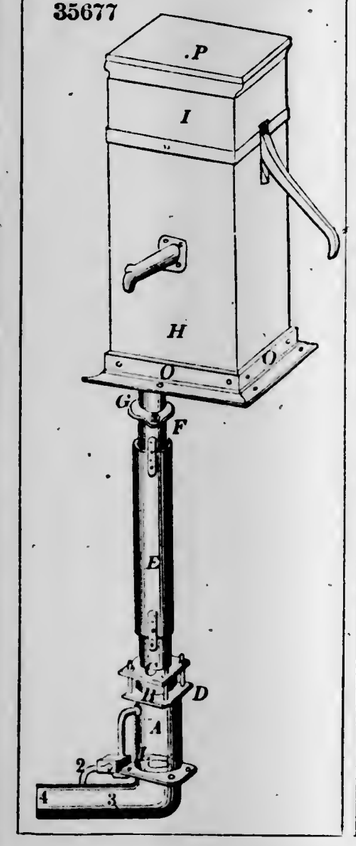
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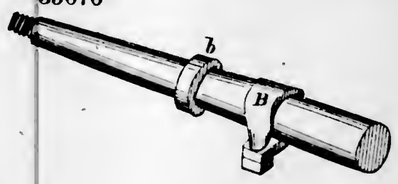
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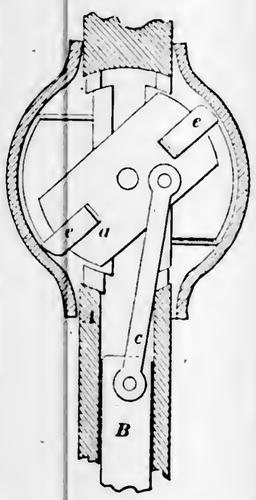
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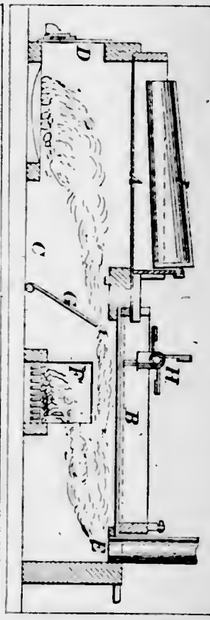
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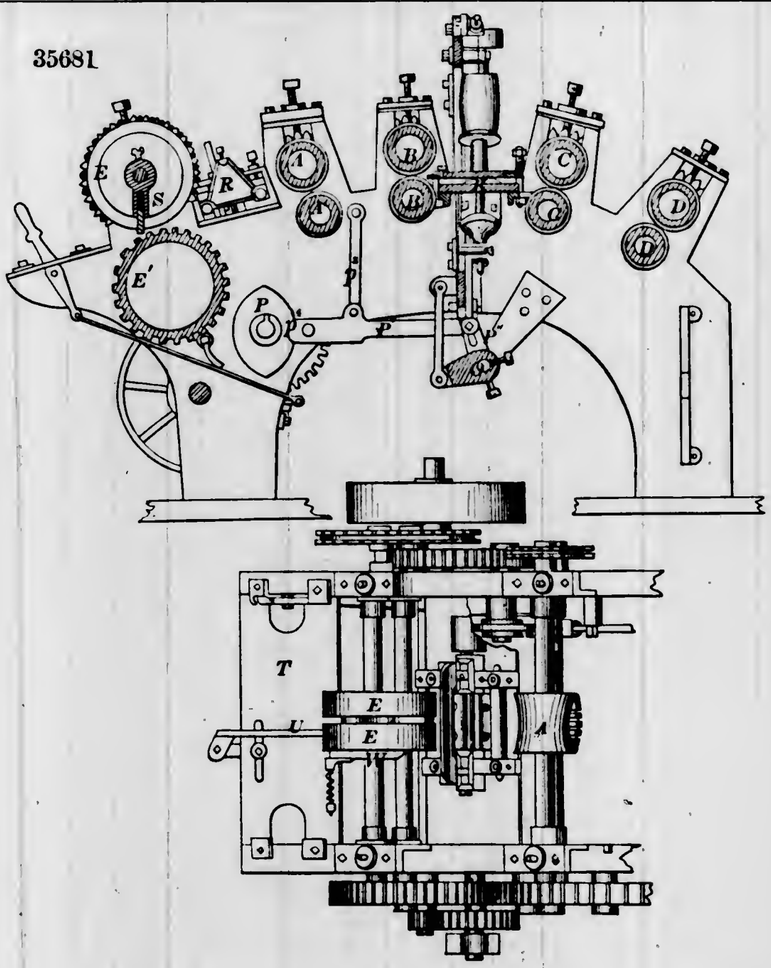
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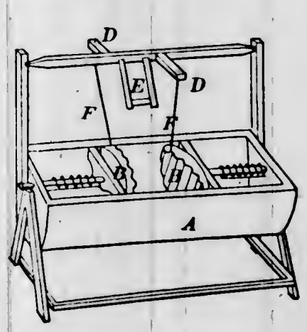
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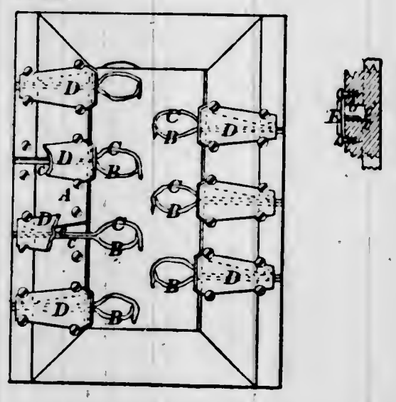
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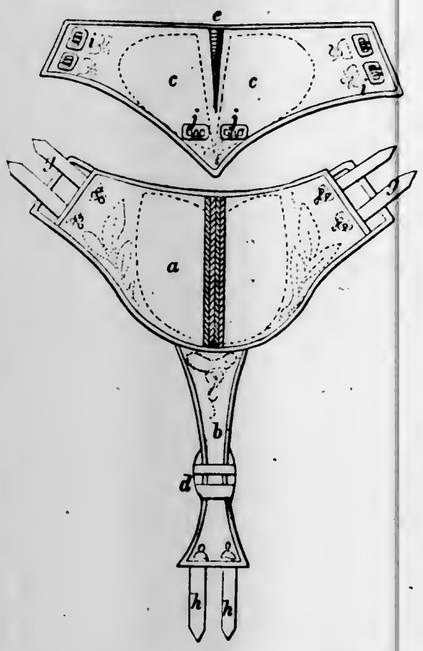
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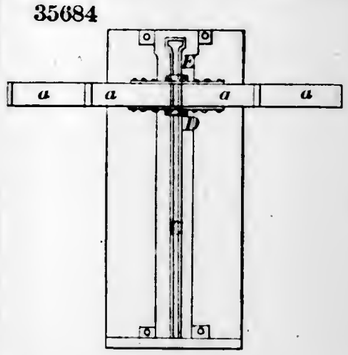
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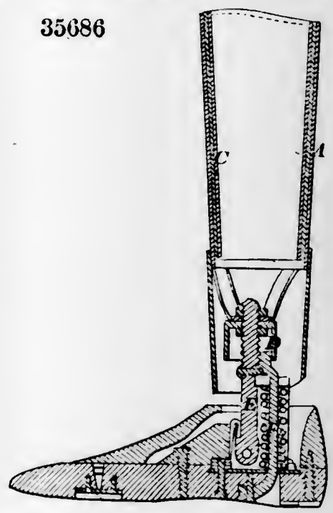
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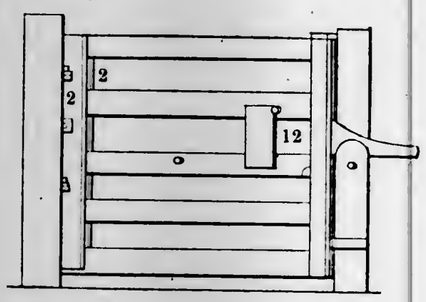
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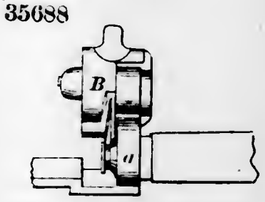
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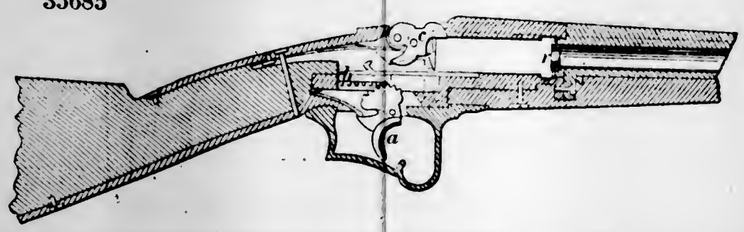
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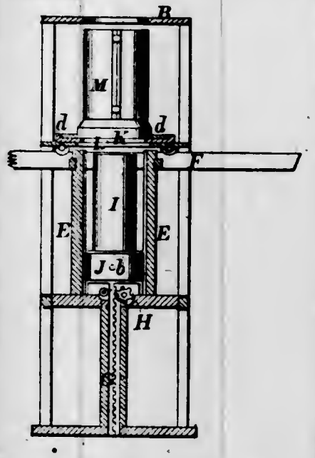
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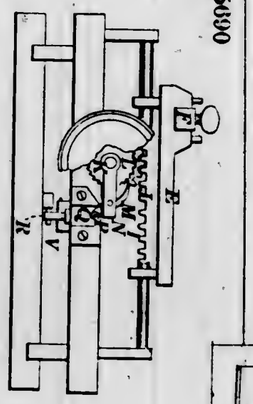
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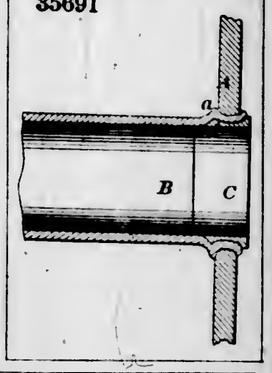
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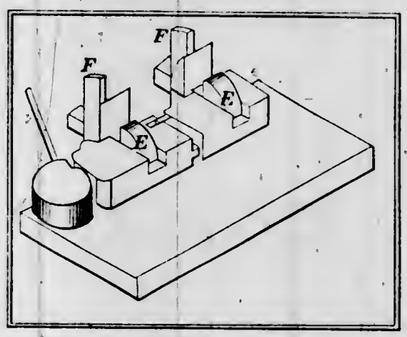
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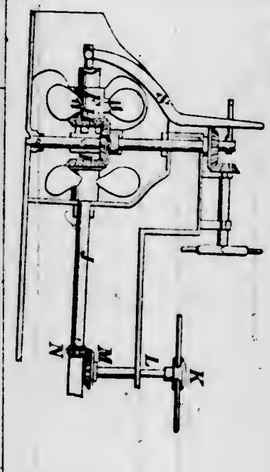
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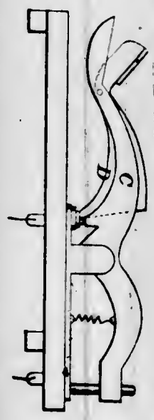
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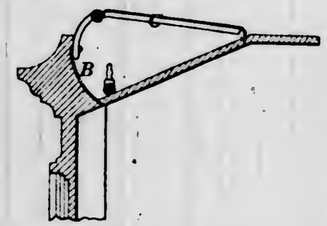
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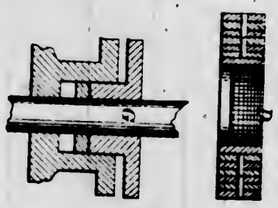
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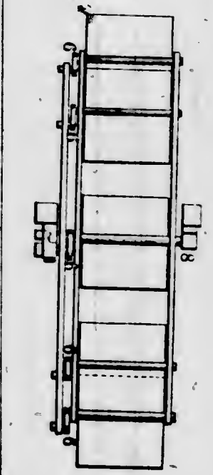
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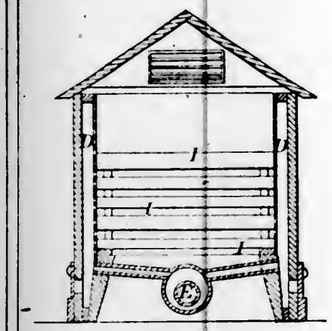
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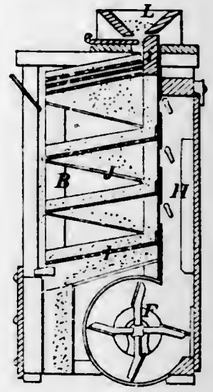
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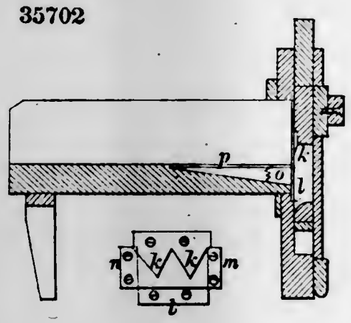
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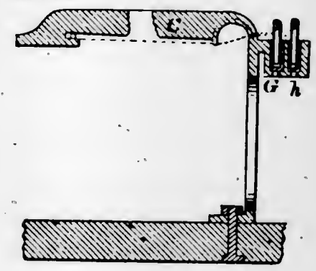
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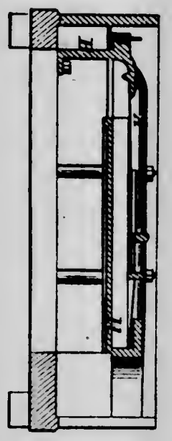
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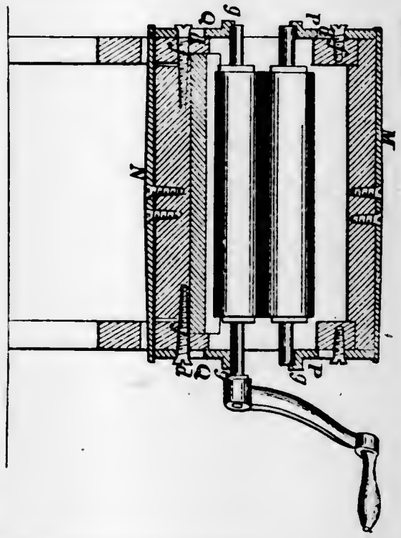
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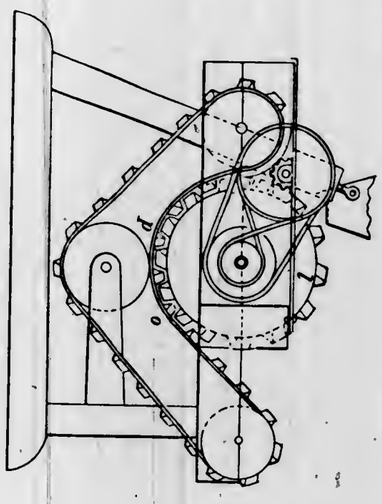
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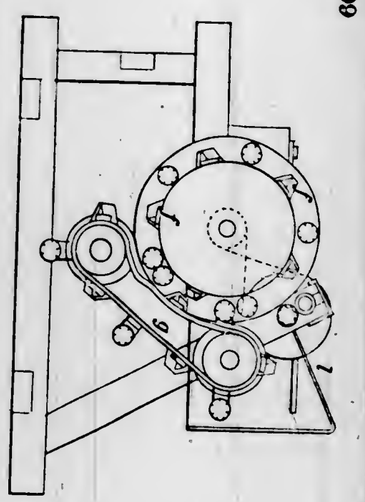
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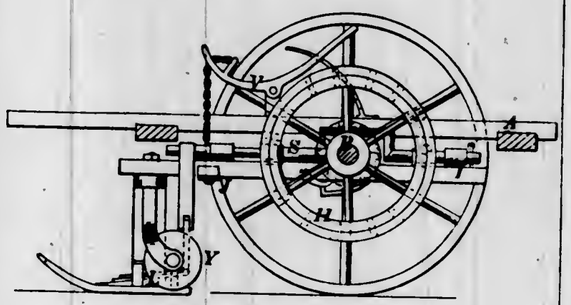
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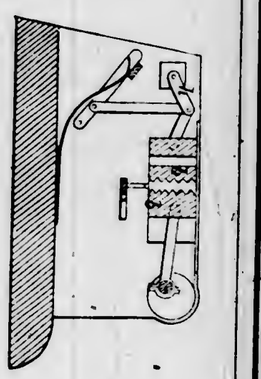
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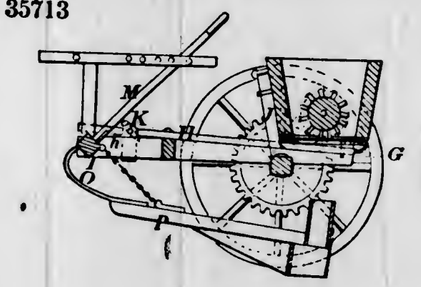
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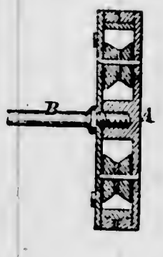
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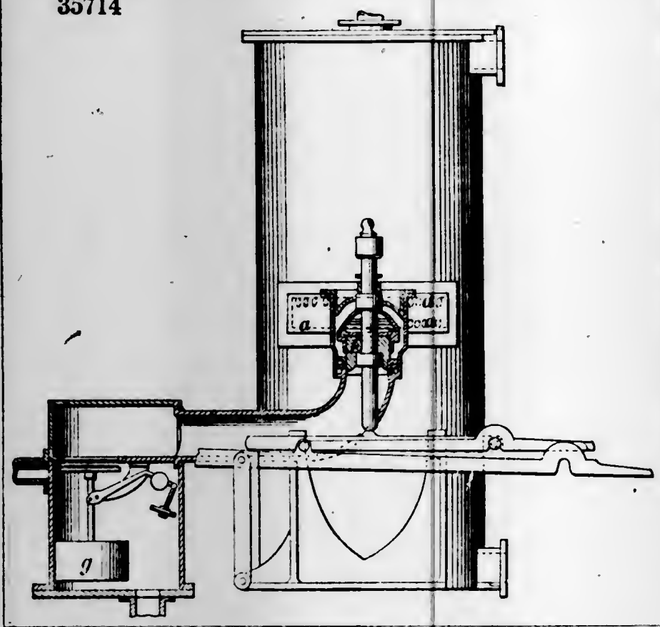


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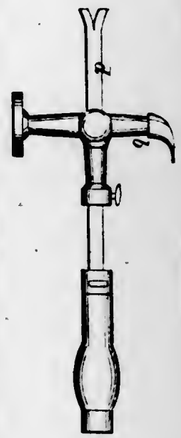


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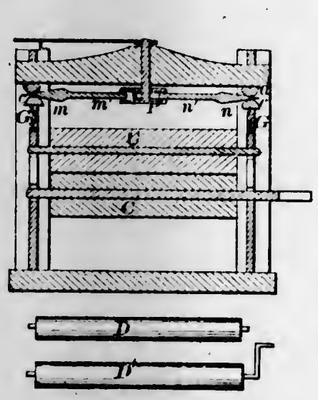
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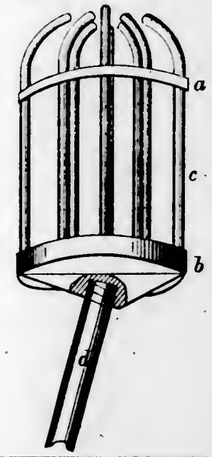
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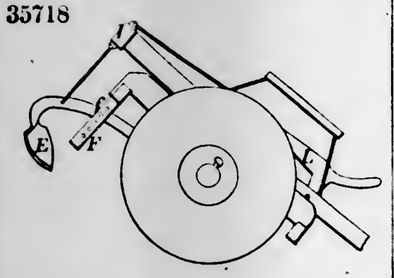
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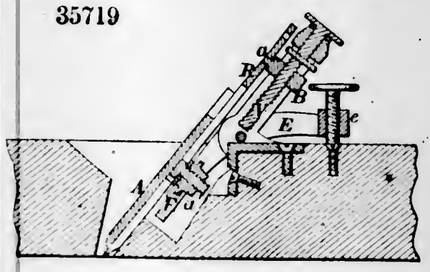
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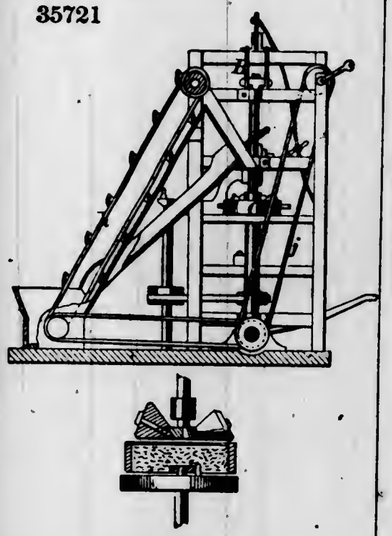
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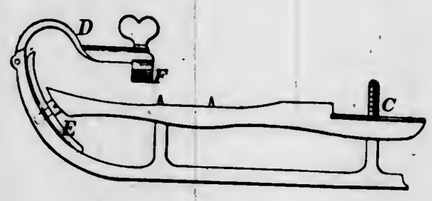
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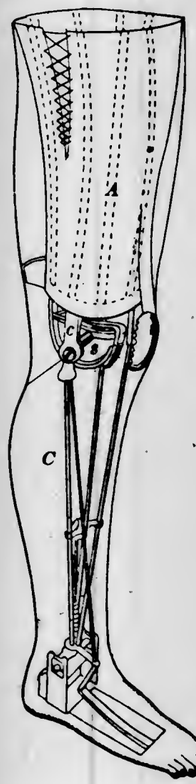
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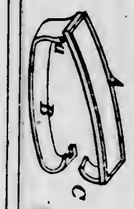
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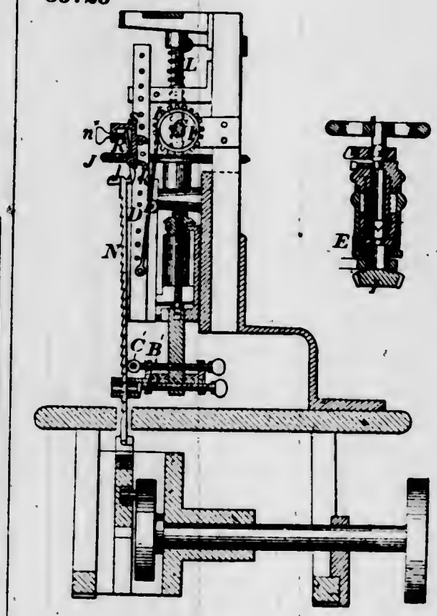
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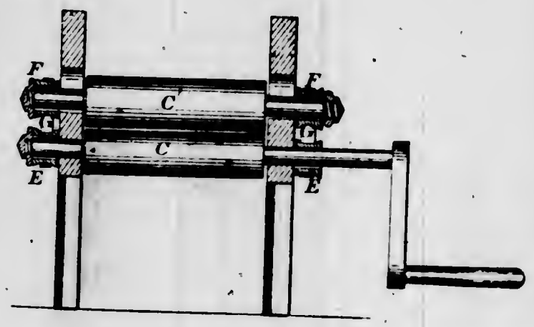
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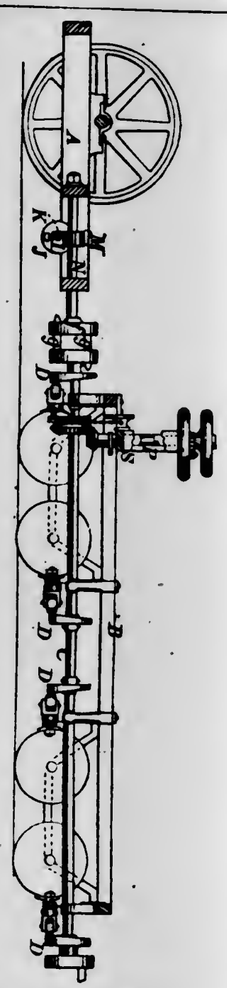
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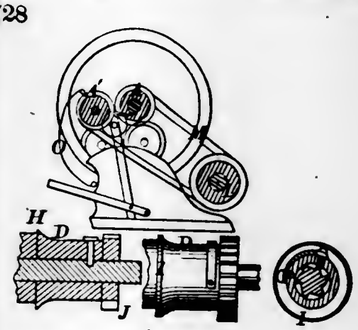
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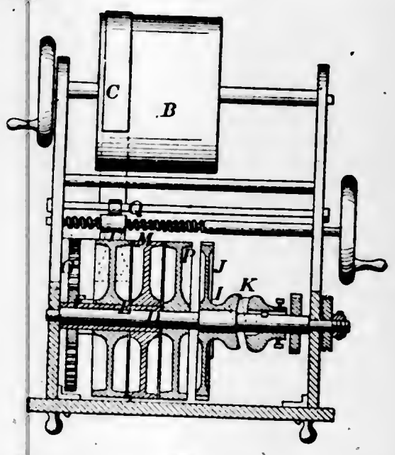
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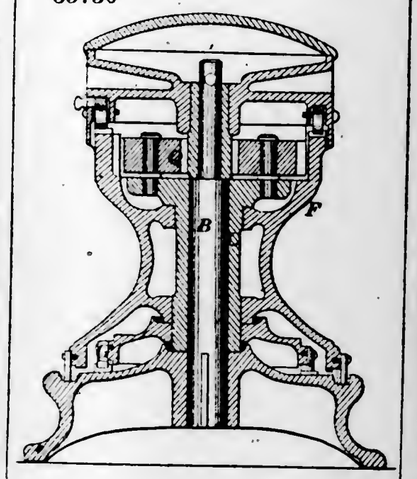
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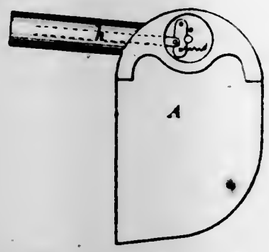
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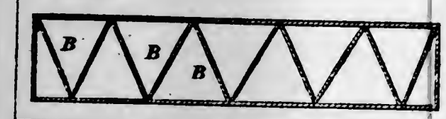
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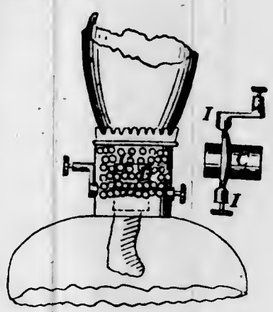
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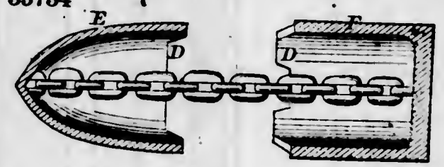
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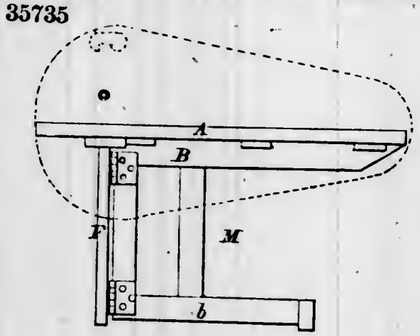
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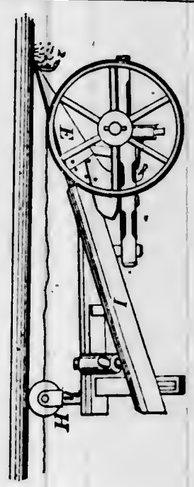
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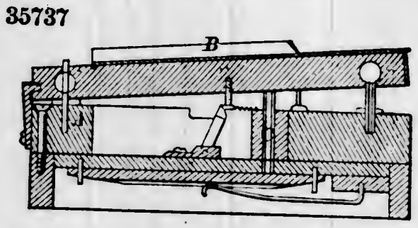
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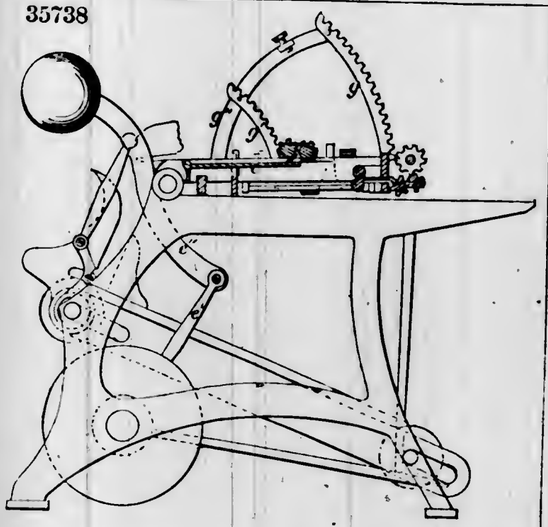
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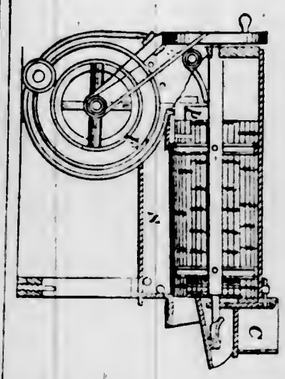
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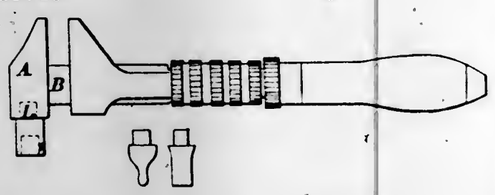
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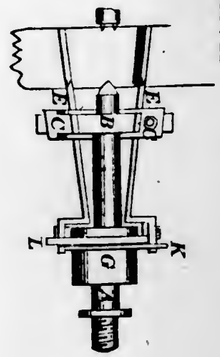
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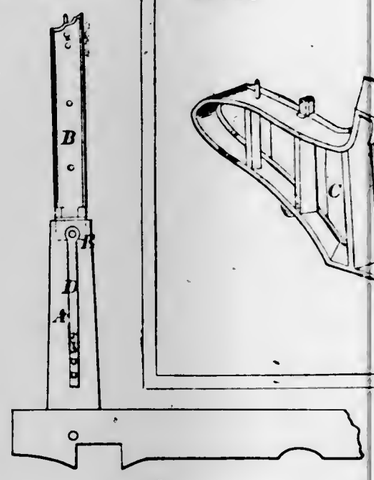
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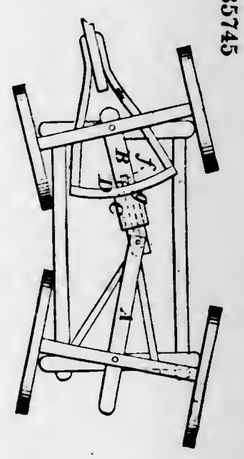


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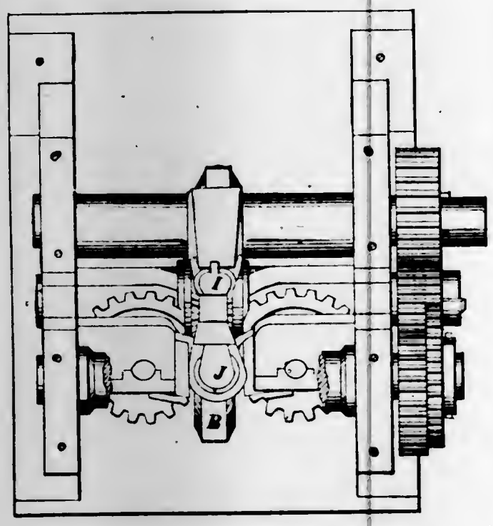


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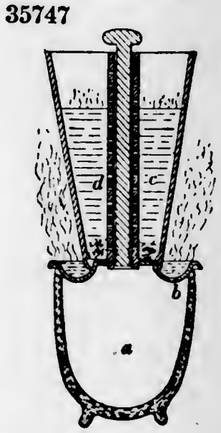
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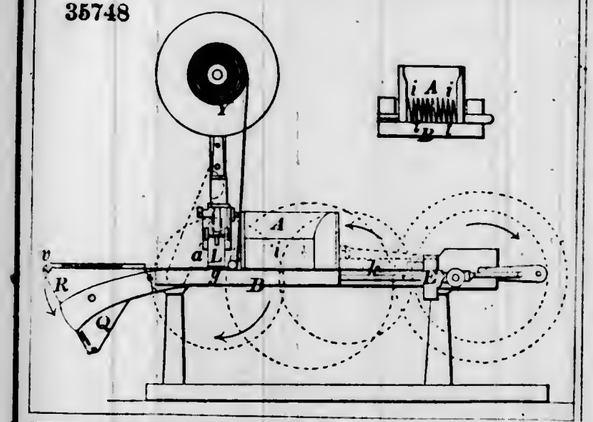
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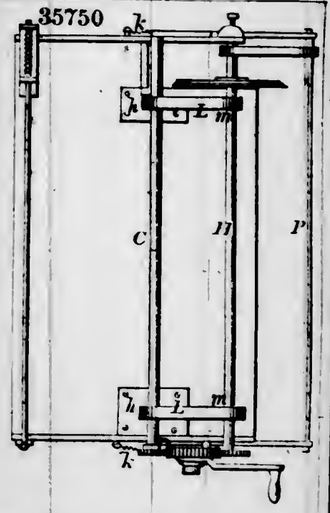
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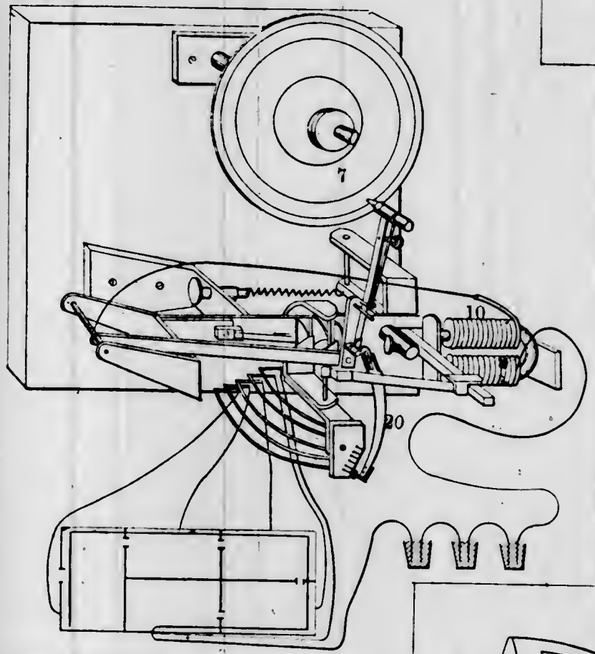
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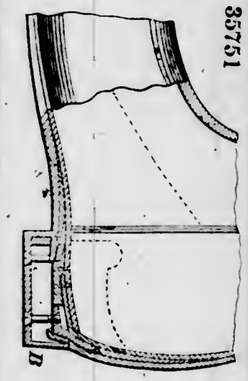
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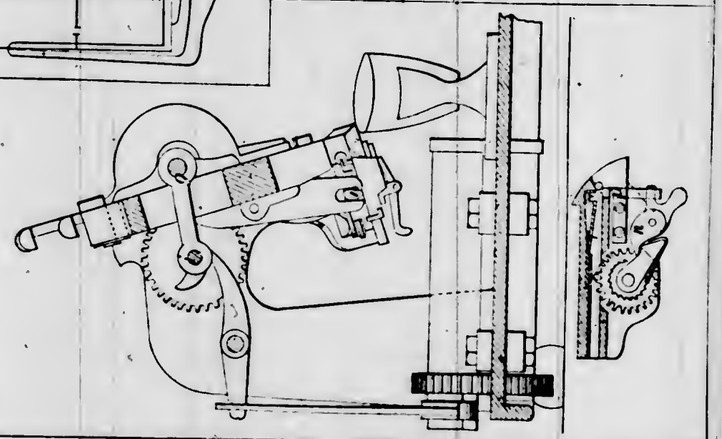
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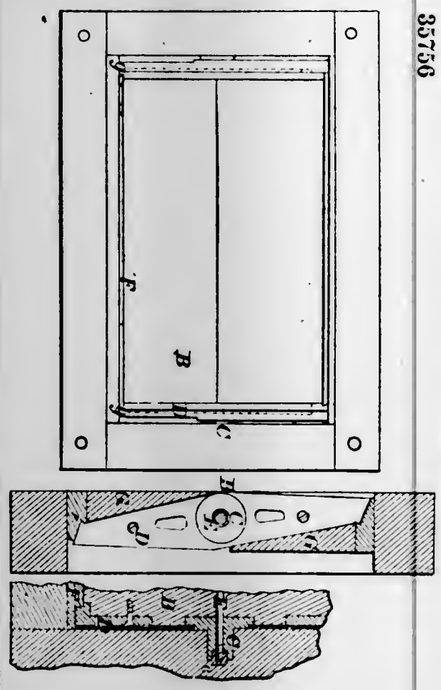
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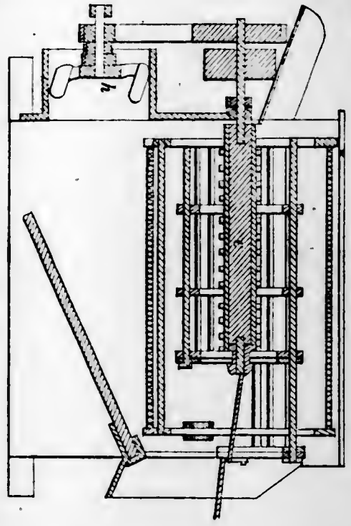
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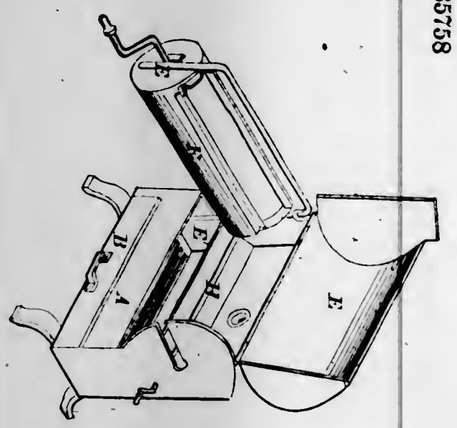
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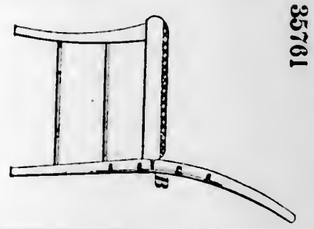
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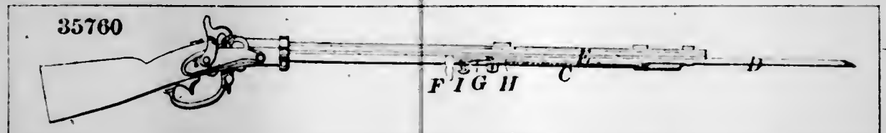
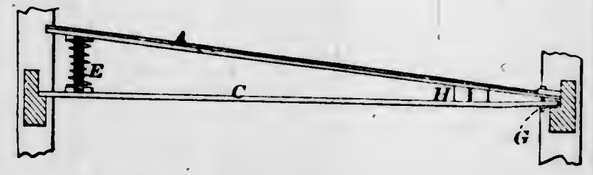


FIG II

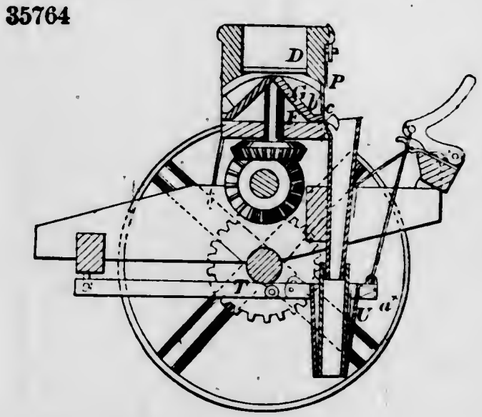
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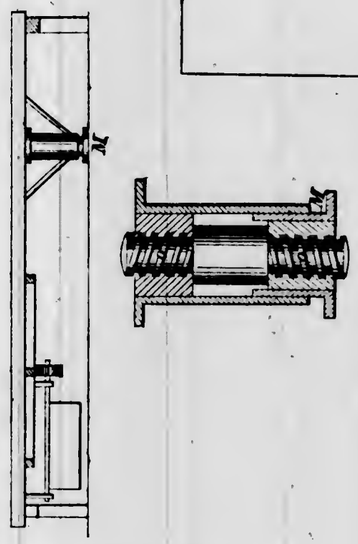
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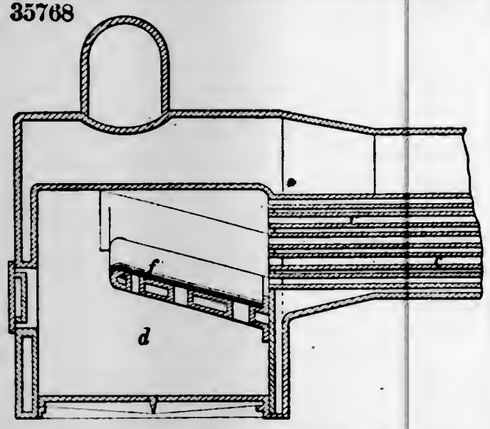
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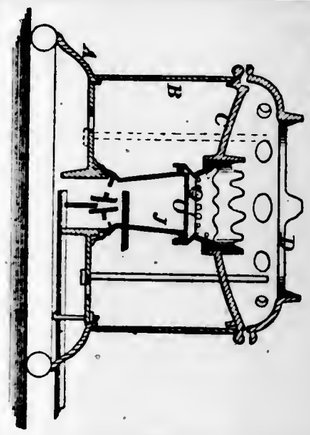
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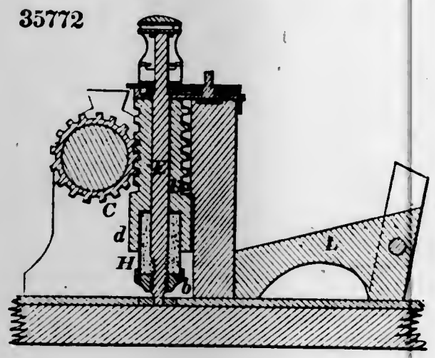
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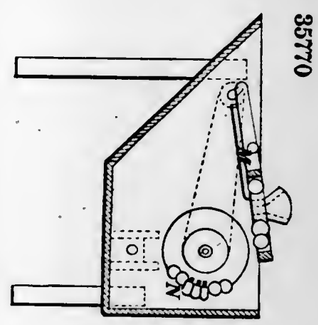
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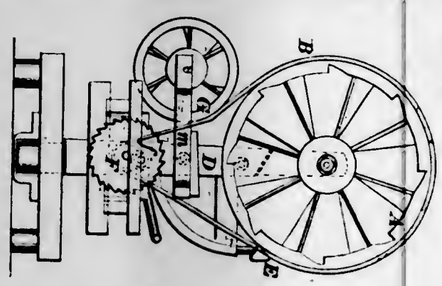
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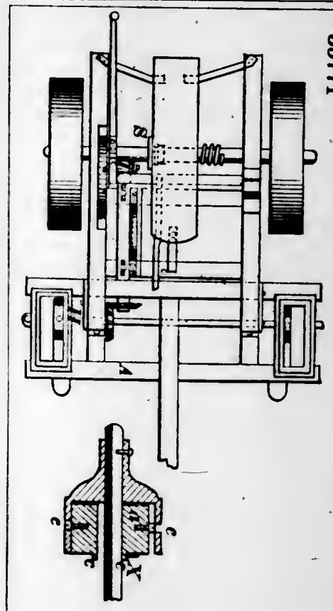
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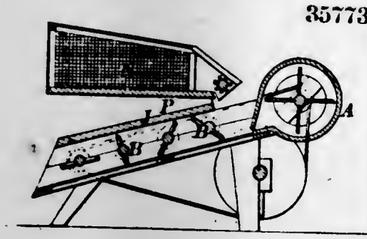
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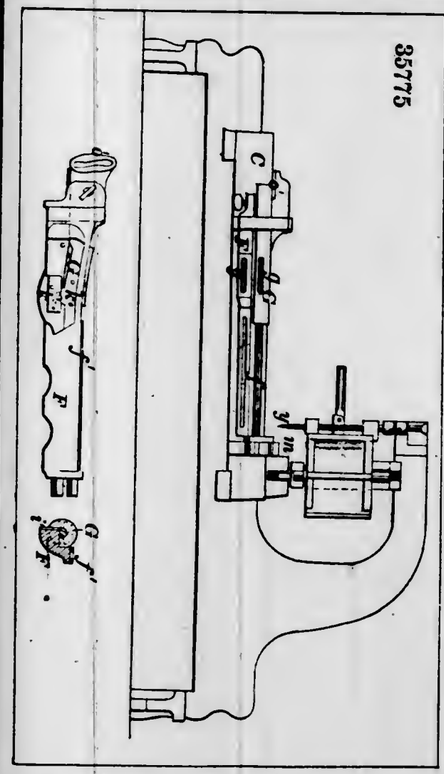
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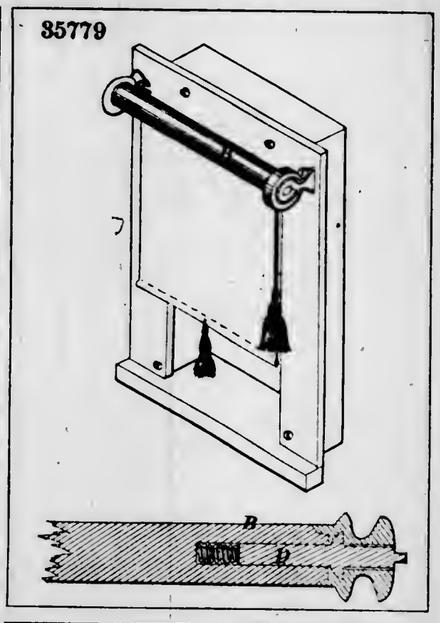
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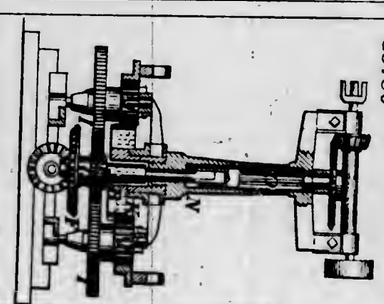
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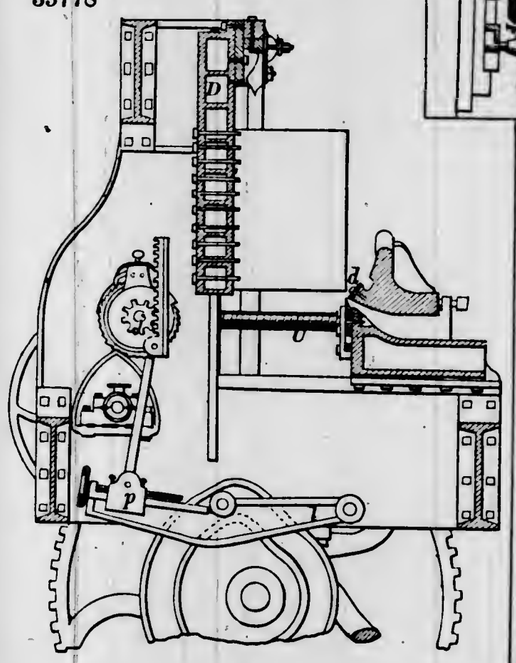
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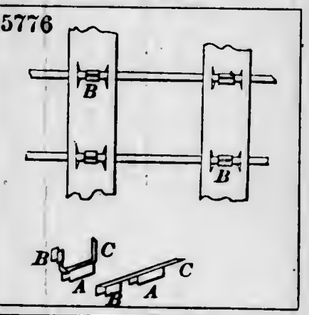
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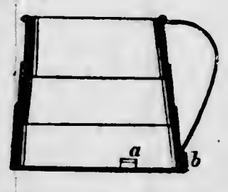
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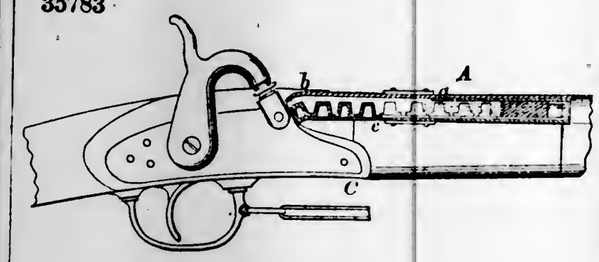
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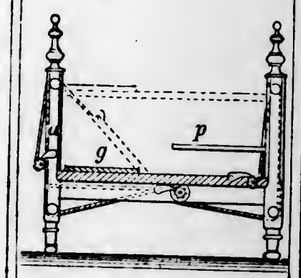
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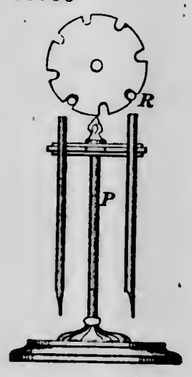
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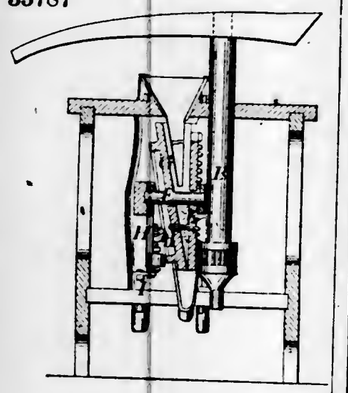
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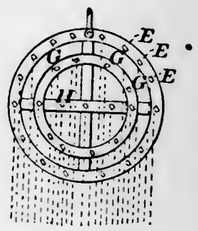
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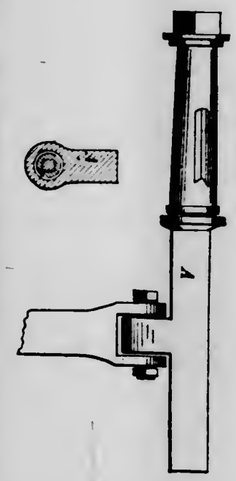
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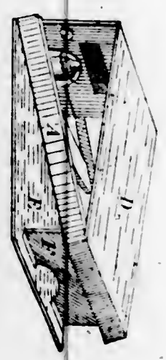
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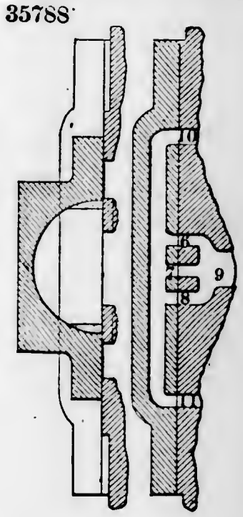
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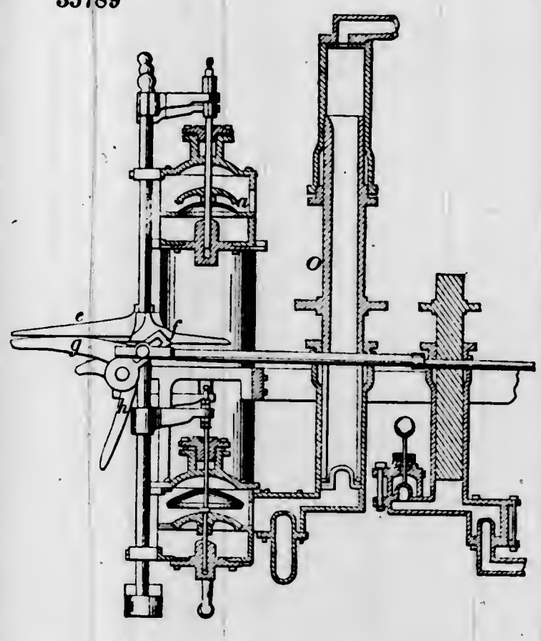
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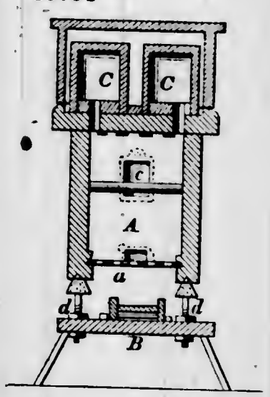
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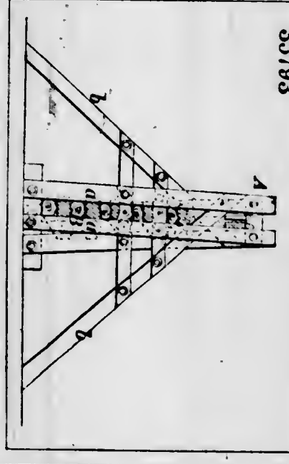
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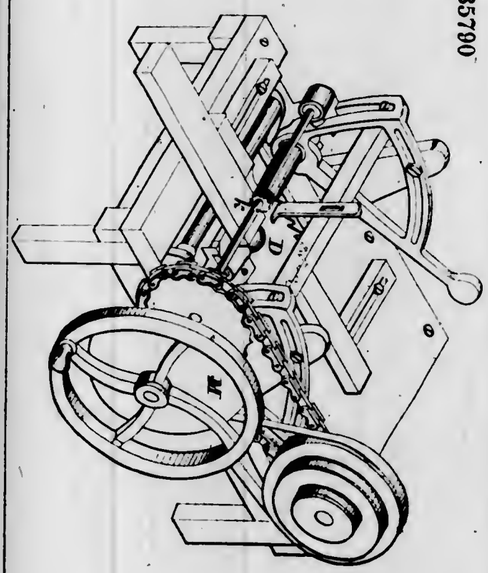
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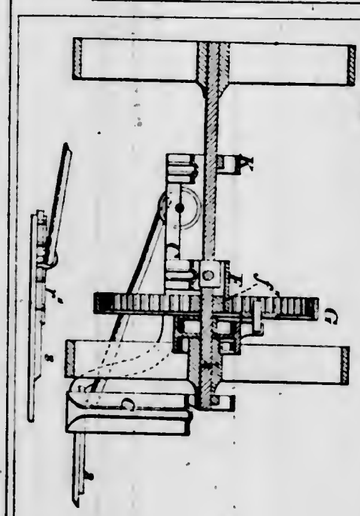
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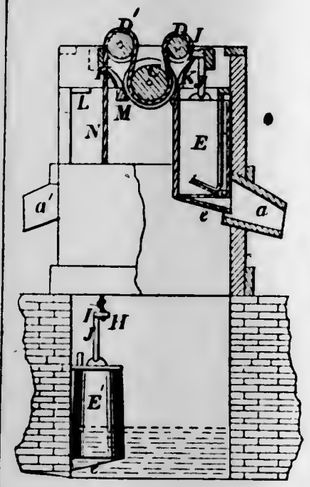
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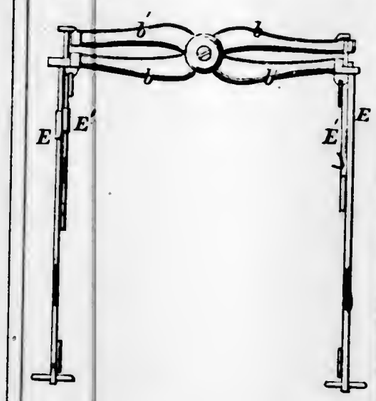
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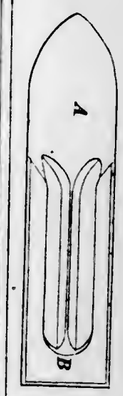
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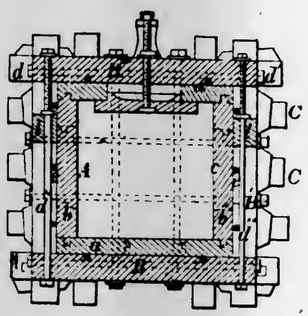
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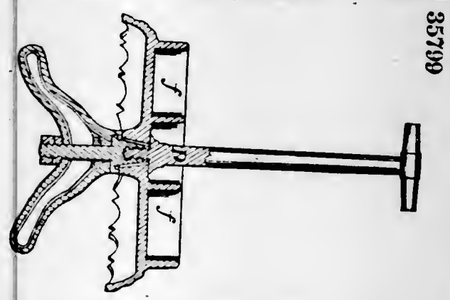
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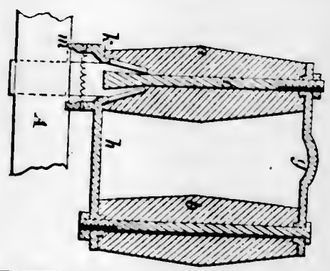
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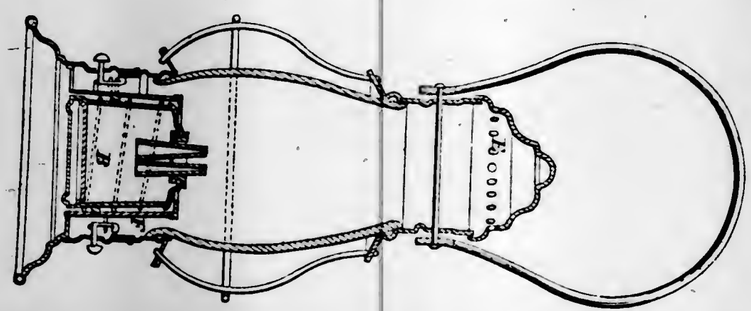
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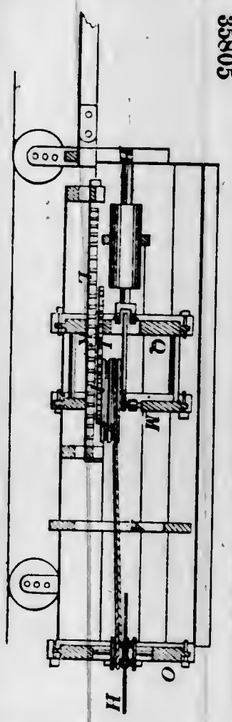
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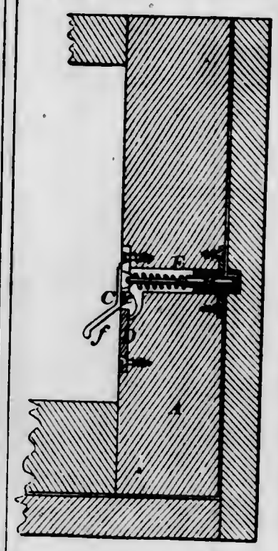
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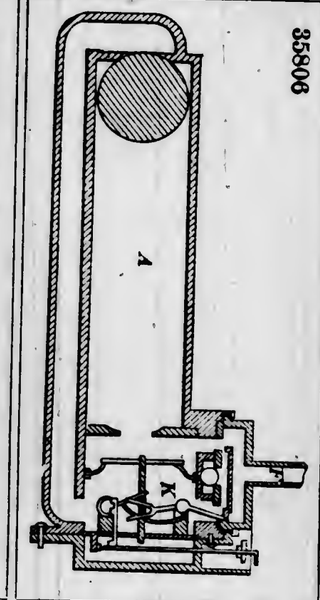
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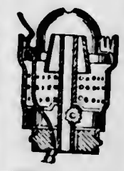
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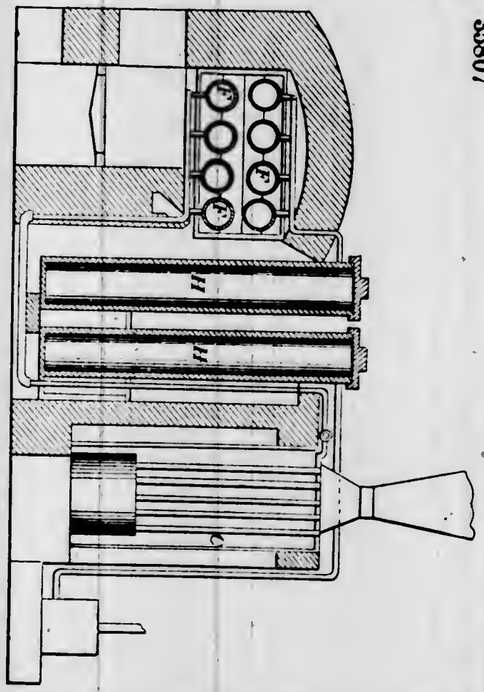
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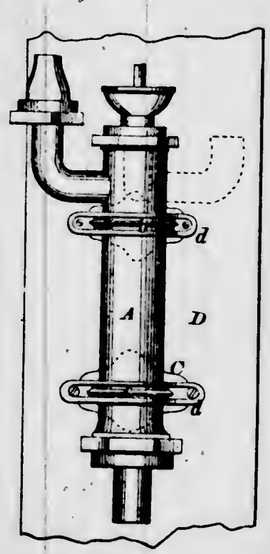
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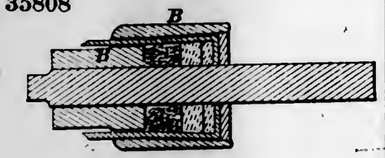
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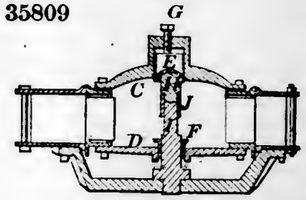
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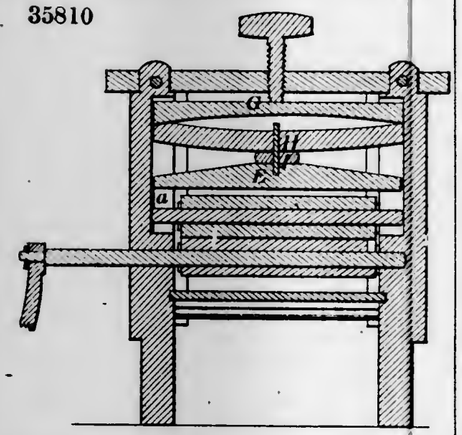
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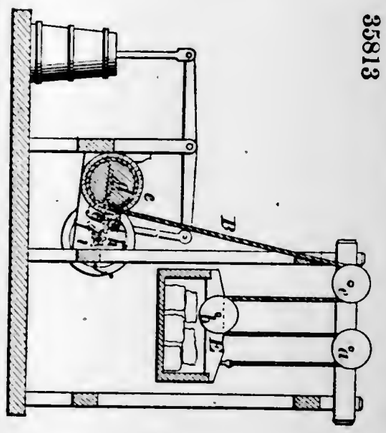
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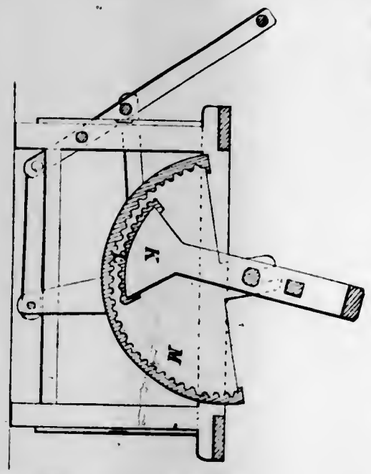
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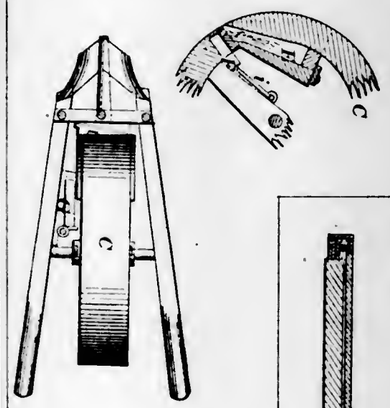
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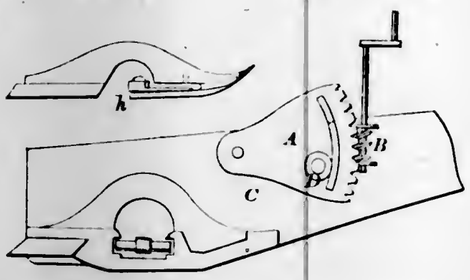
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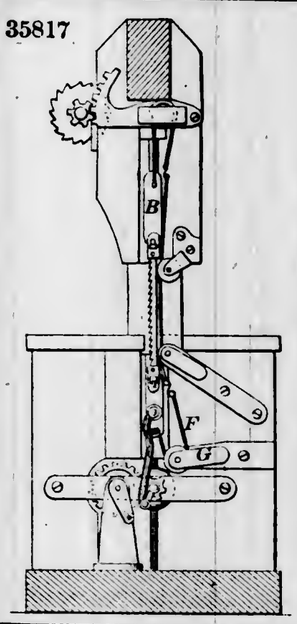
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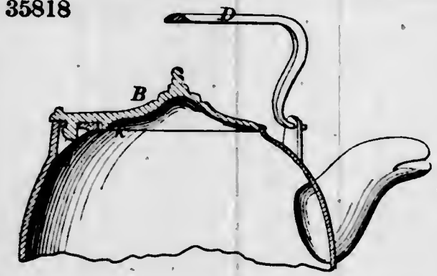
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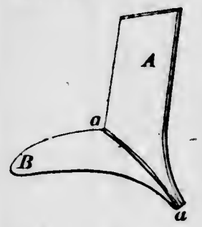
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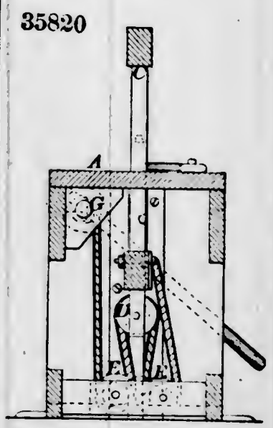
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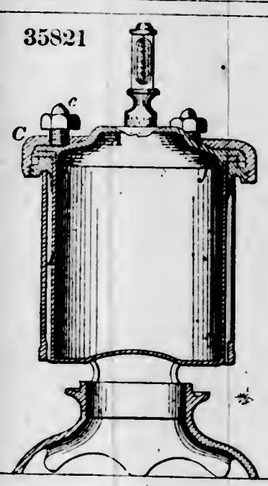
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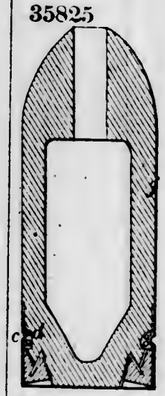
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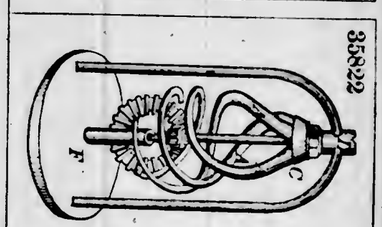
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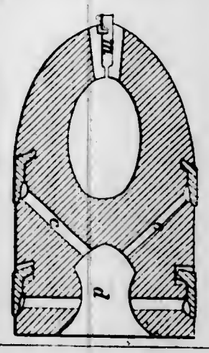
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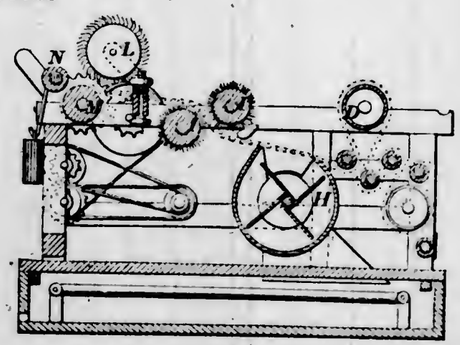
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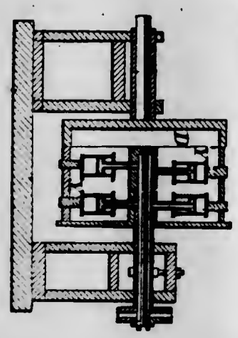
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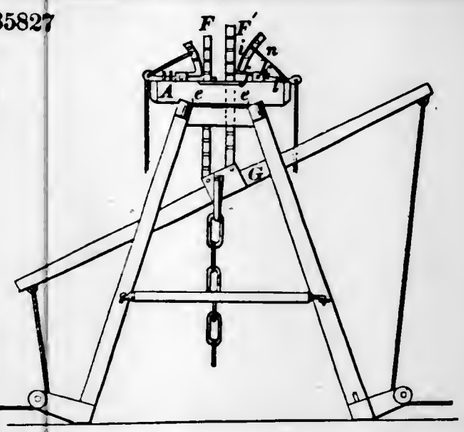
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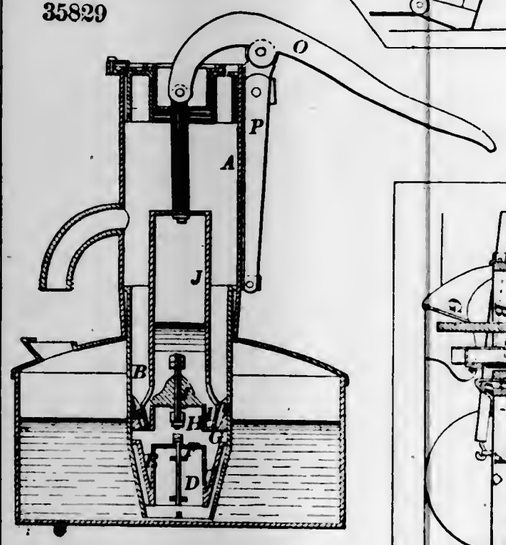
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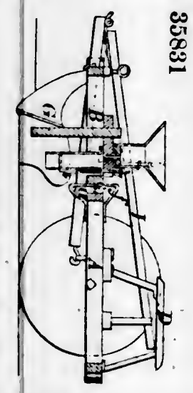
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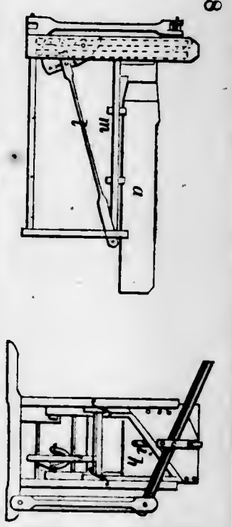
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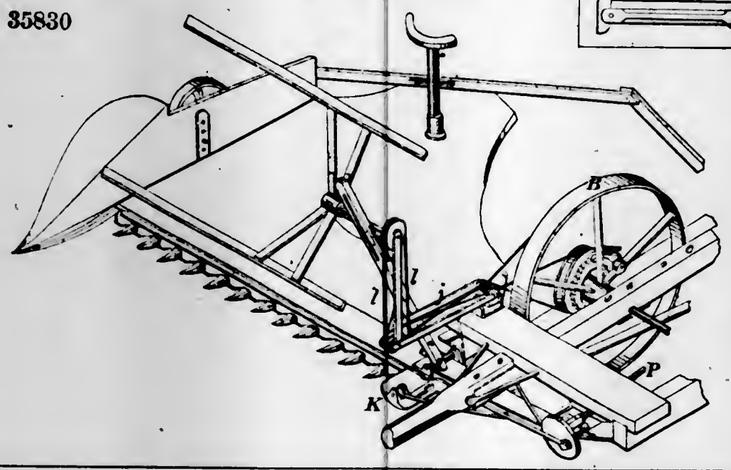
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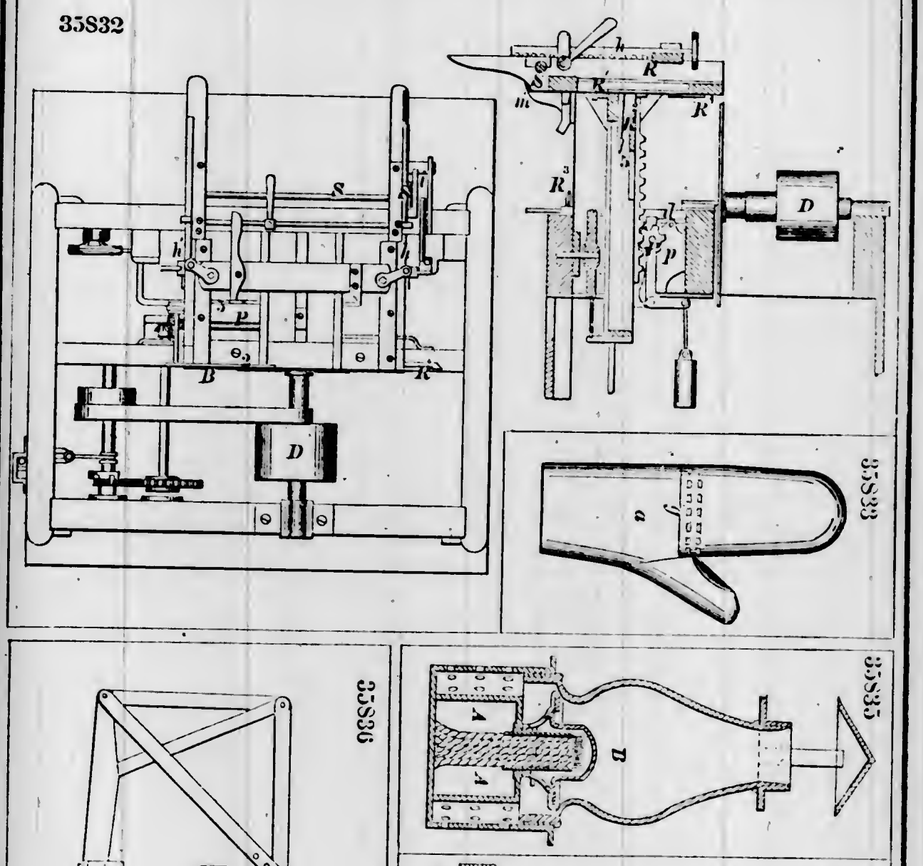
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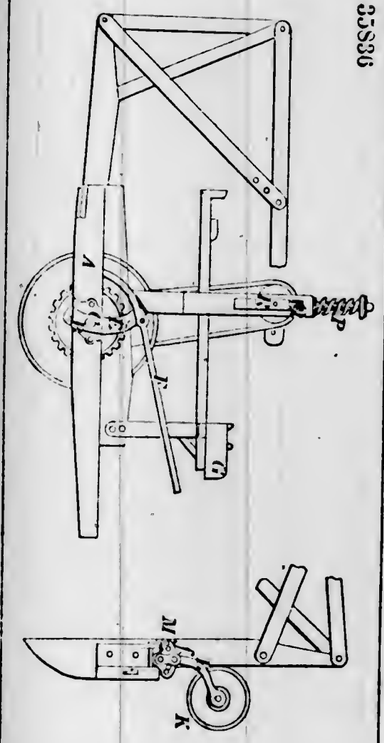


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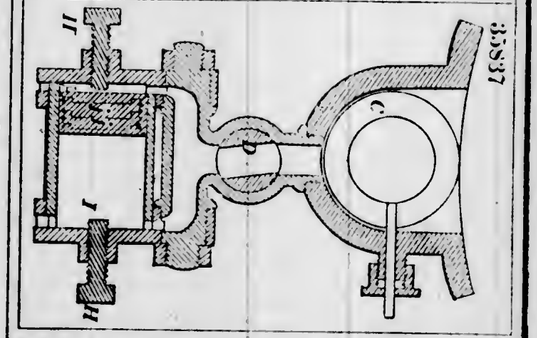
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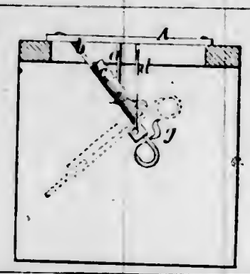


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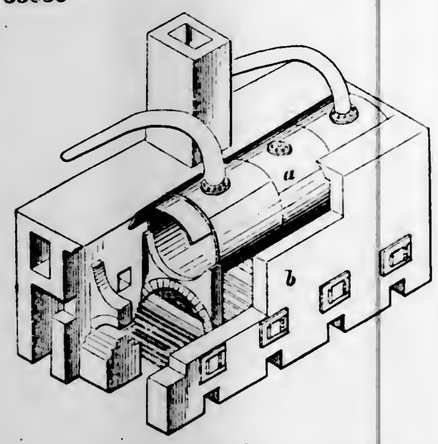
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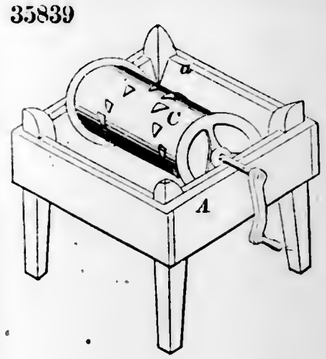
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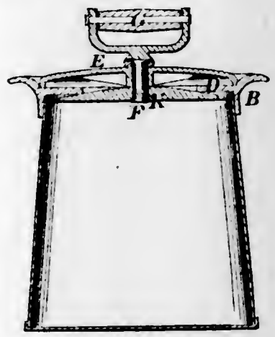
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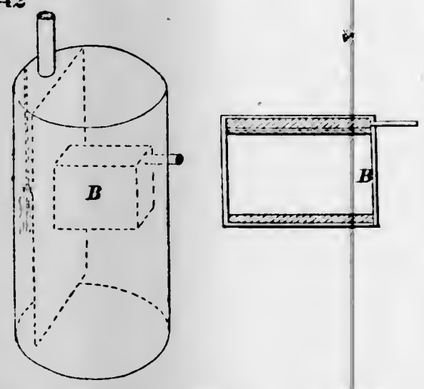
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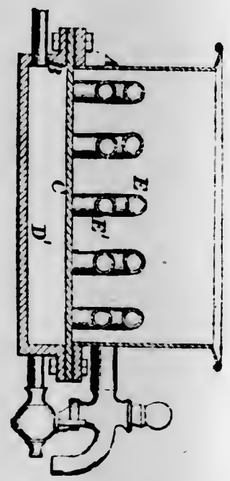
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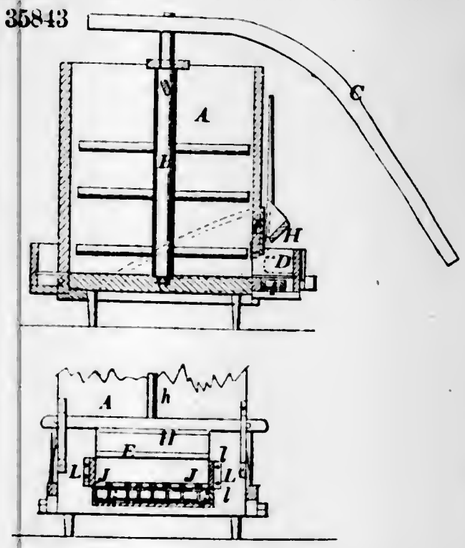
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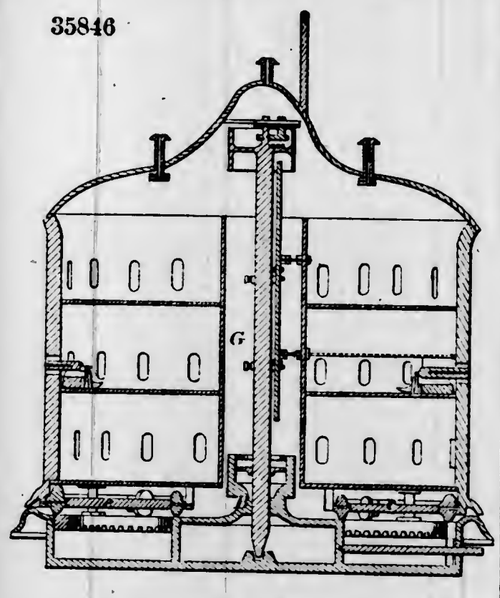
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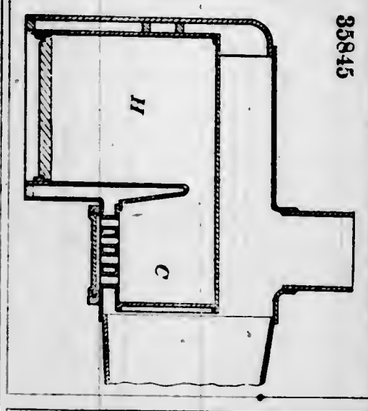
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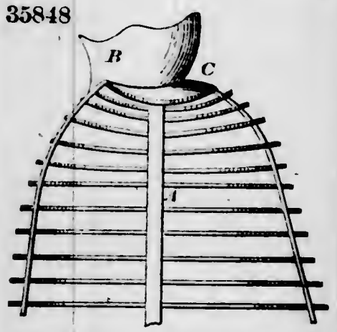
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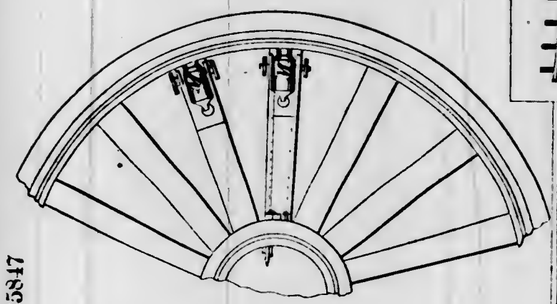
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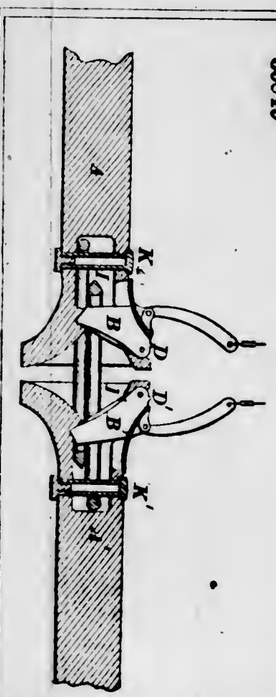
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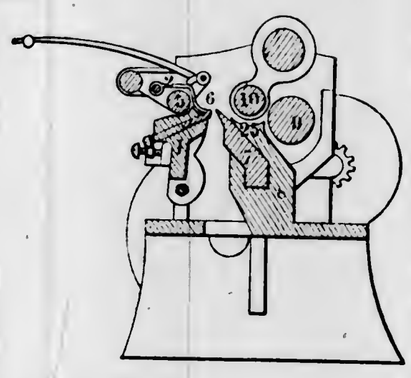
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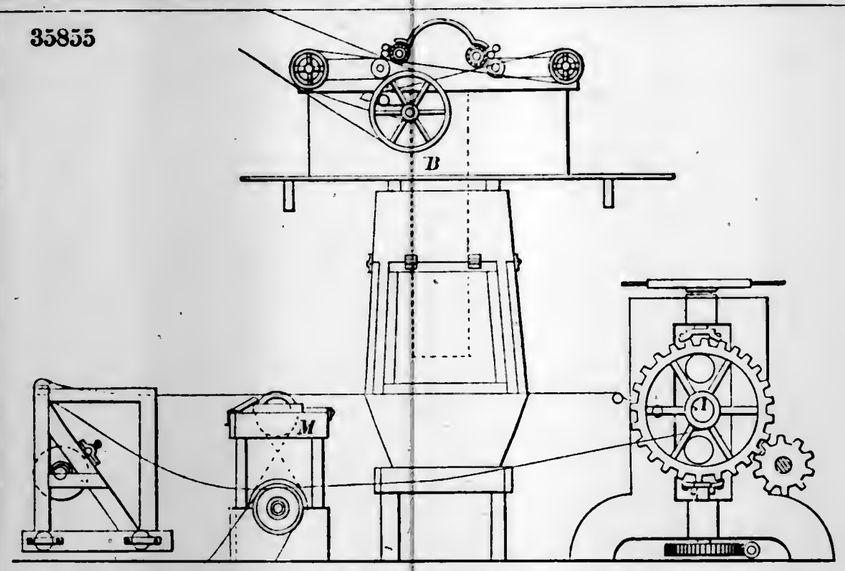
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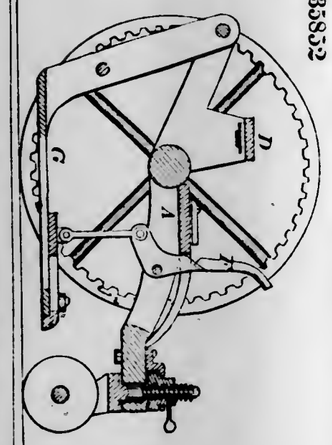
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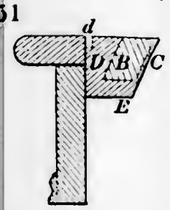
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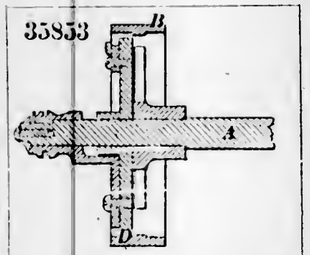
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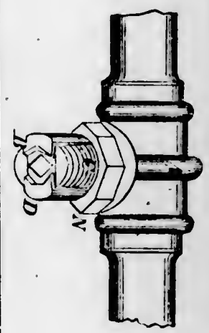
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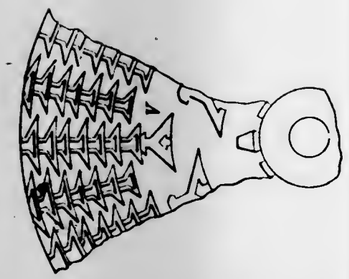
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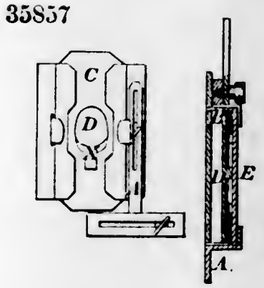
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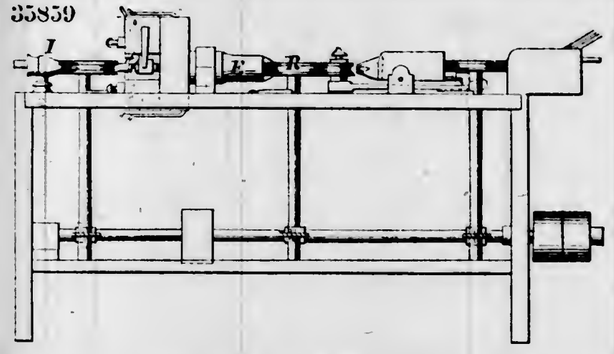
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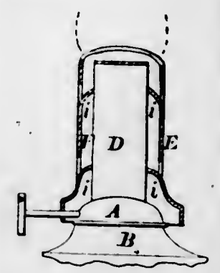
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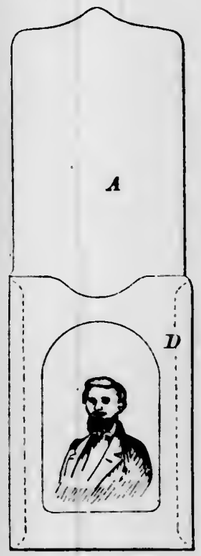
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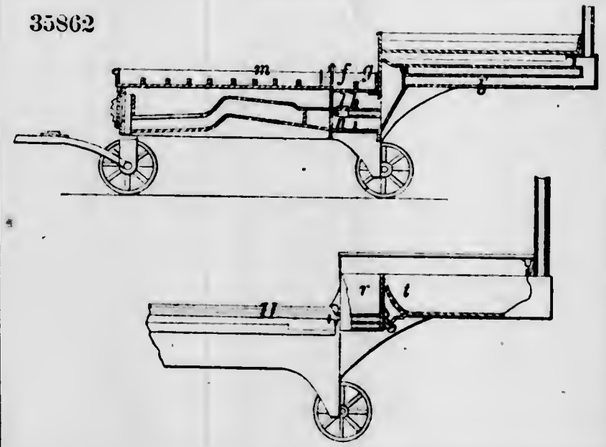
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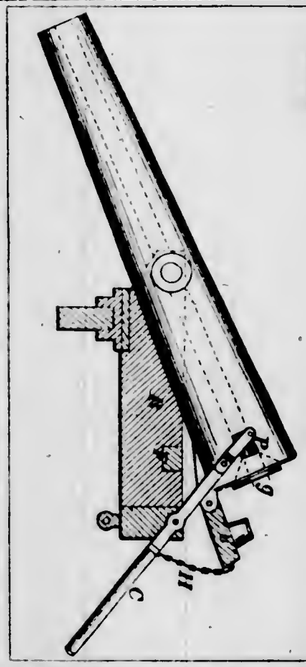
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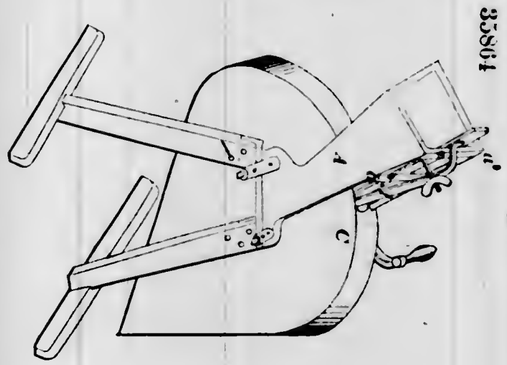
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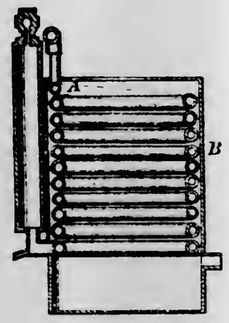
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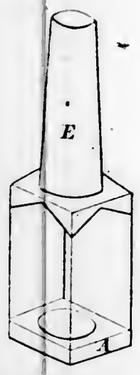
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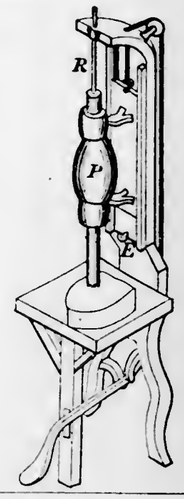
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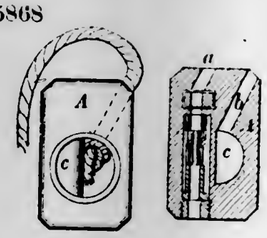
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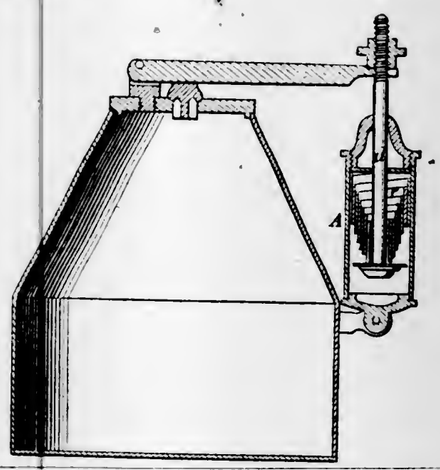
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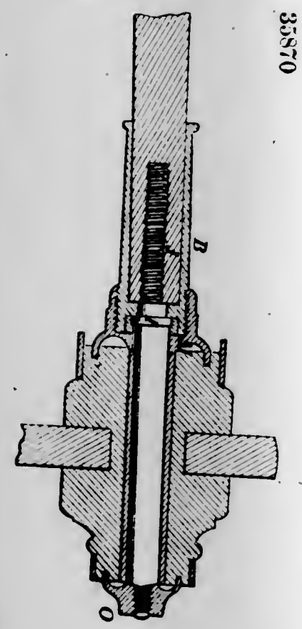
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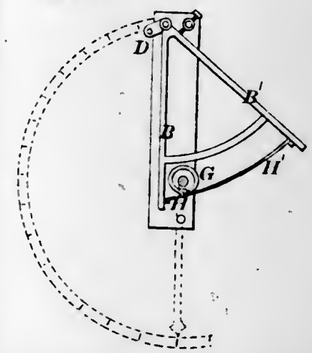
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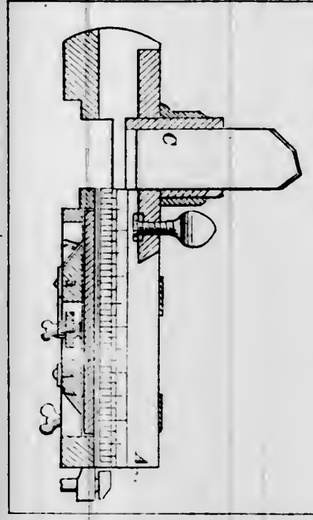
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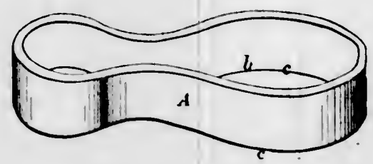
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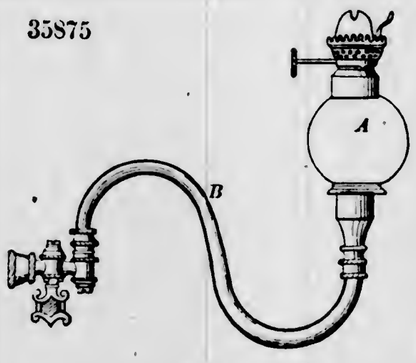
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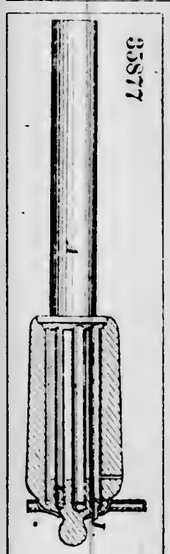
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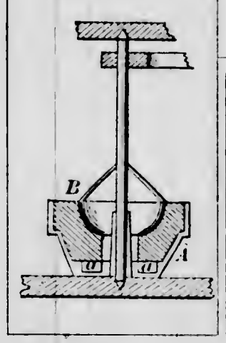
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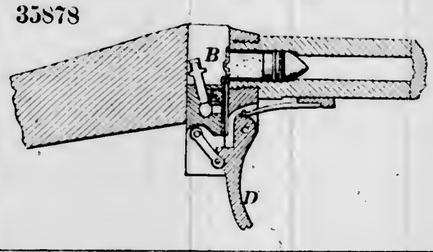
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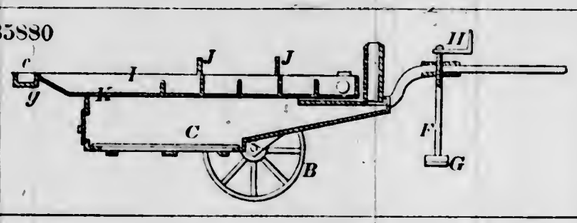
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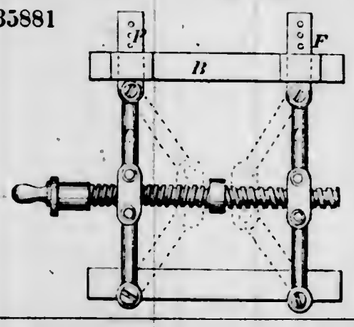
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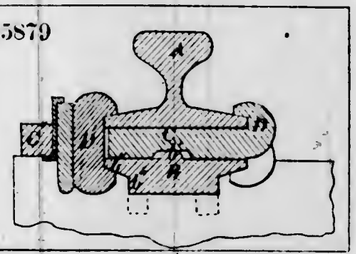
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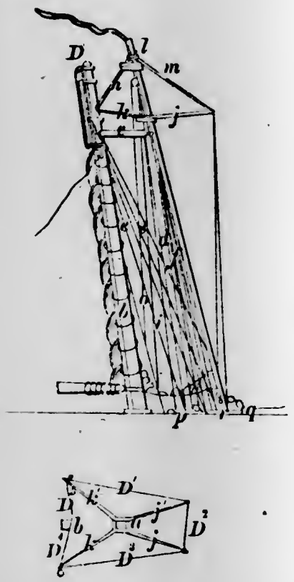
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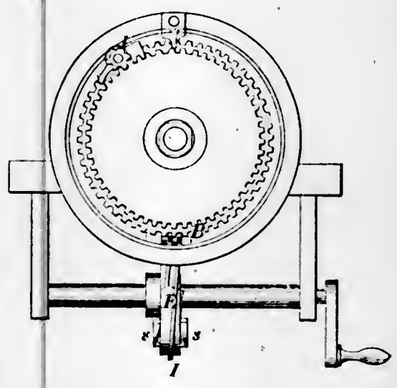
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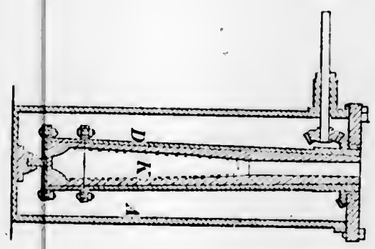
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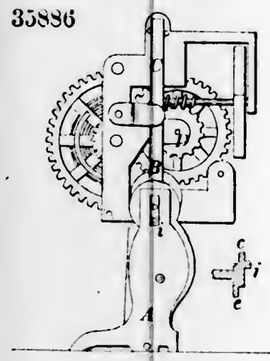
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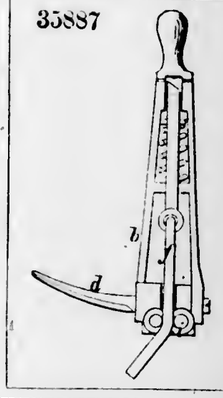
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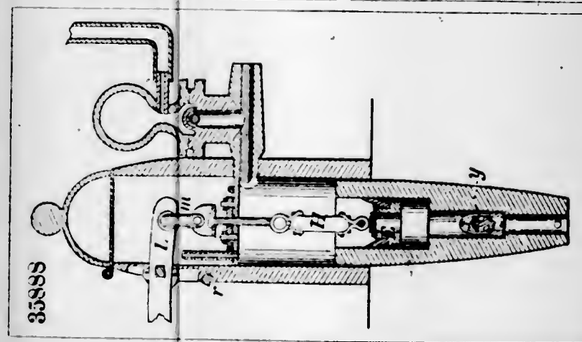
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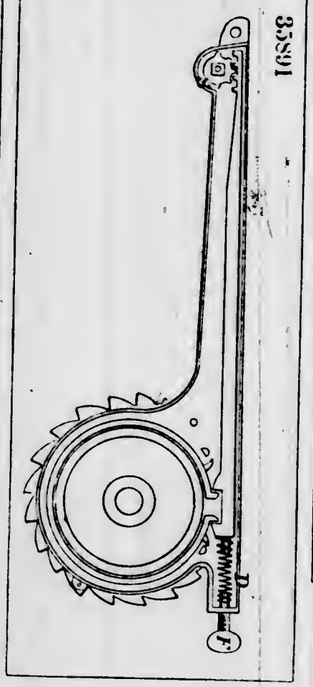
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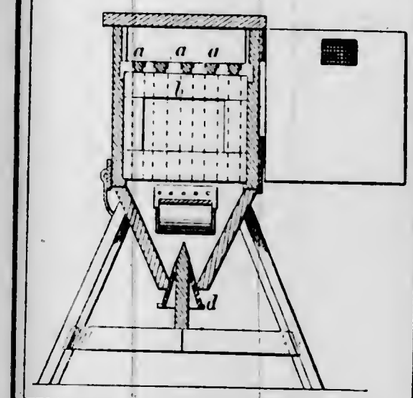
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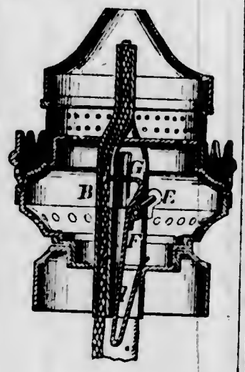
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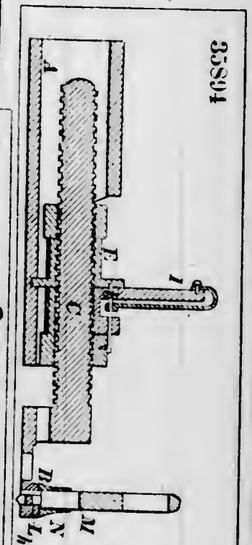
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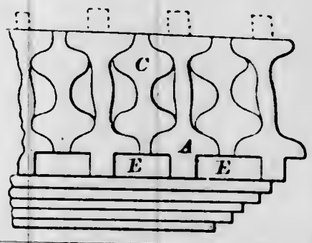
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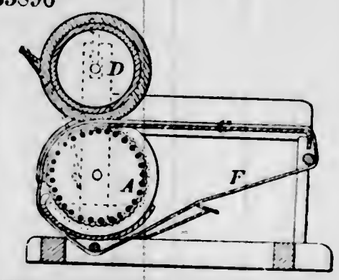
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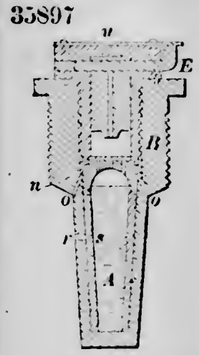


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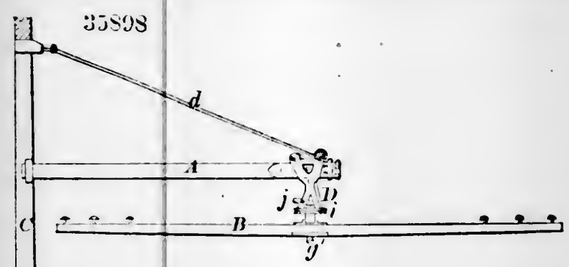
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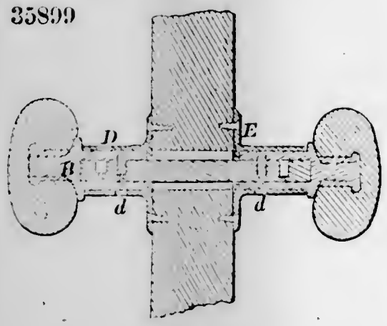
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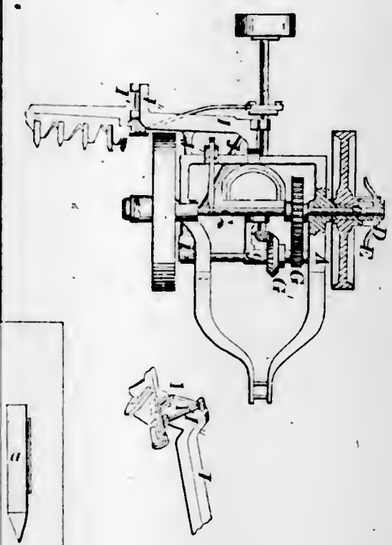
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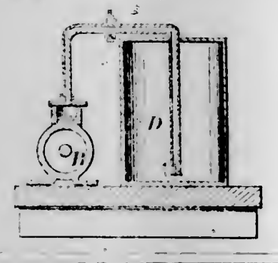
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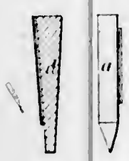
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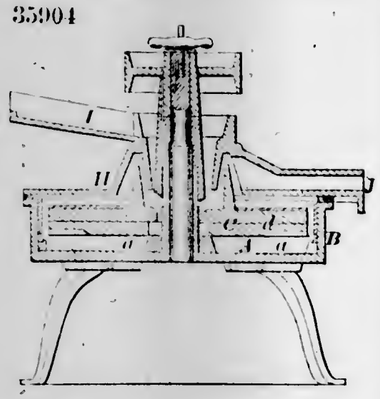
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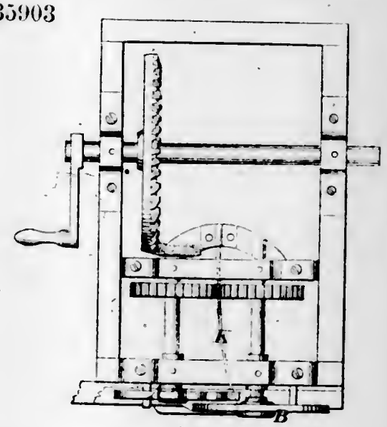
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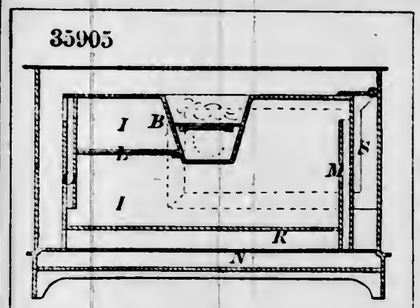
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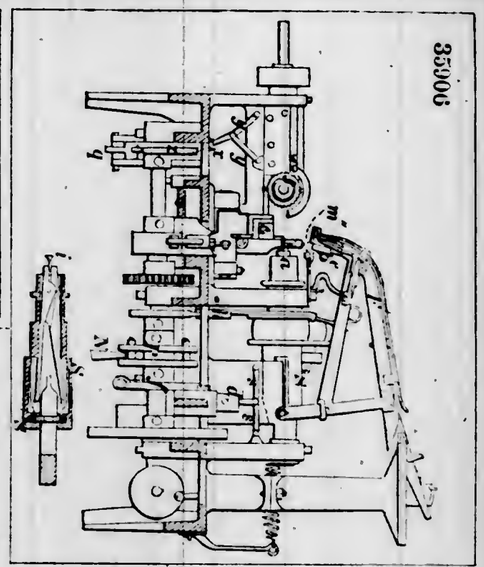
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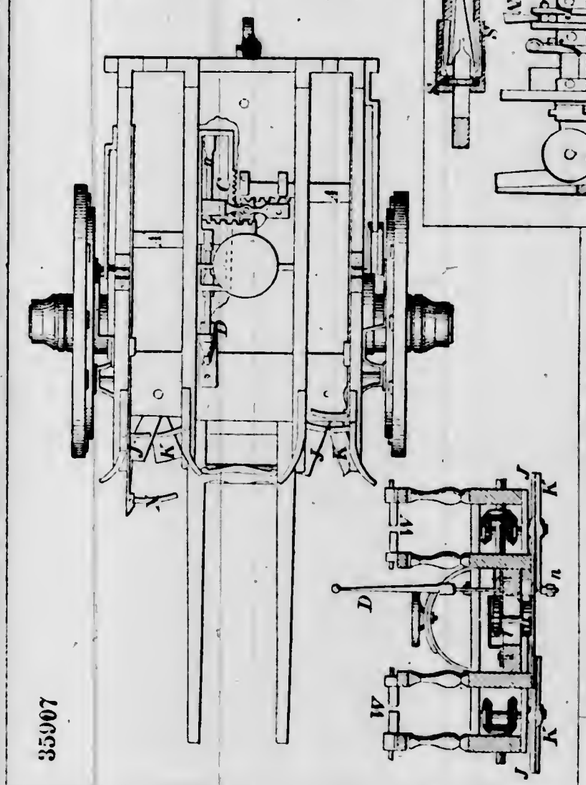
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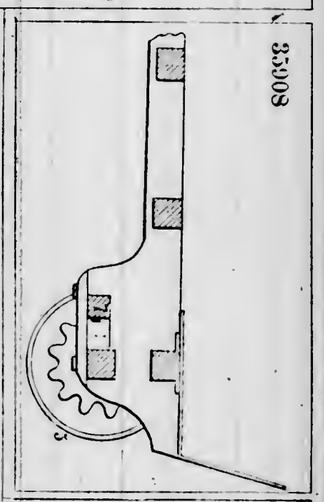
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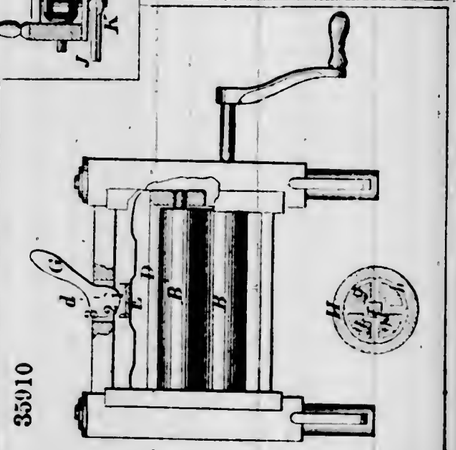
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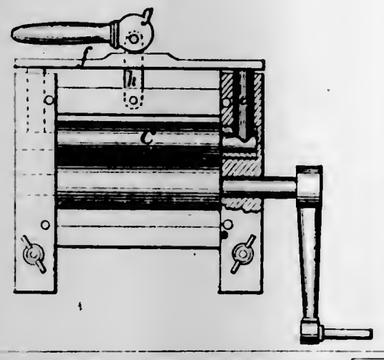
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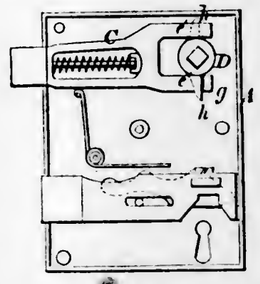
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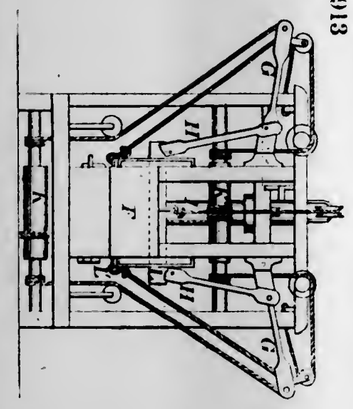
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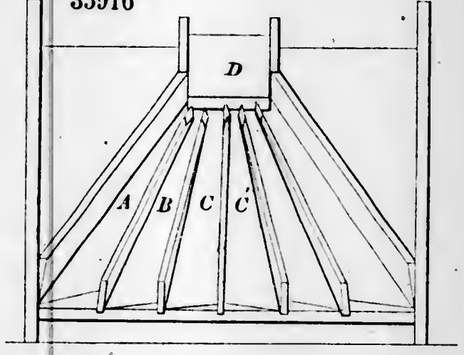
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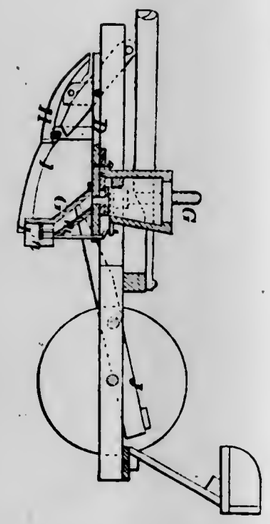
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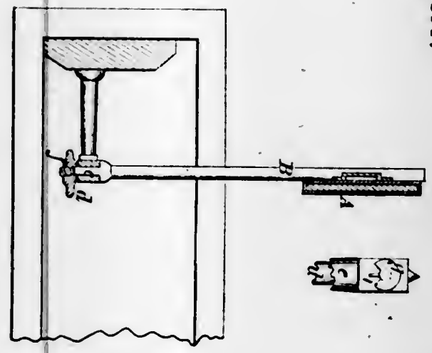
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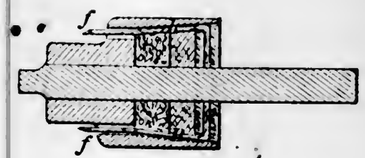
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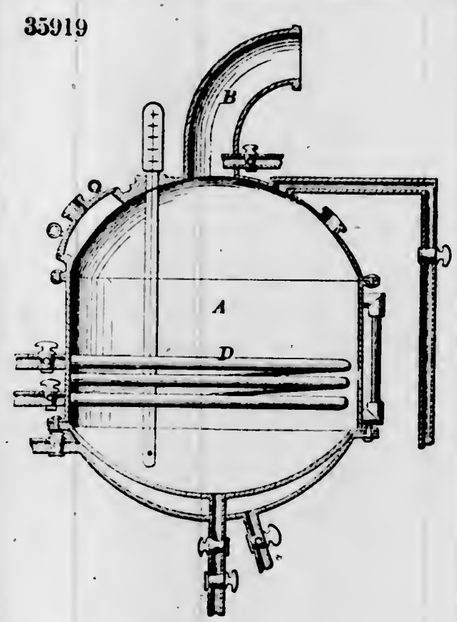
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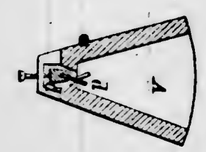
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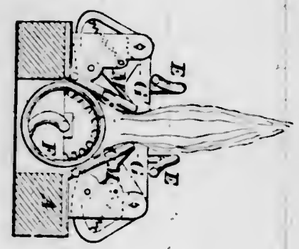
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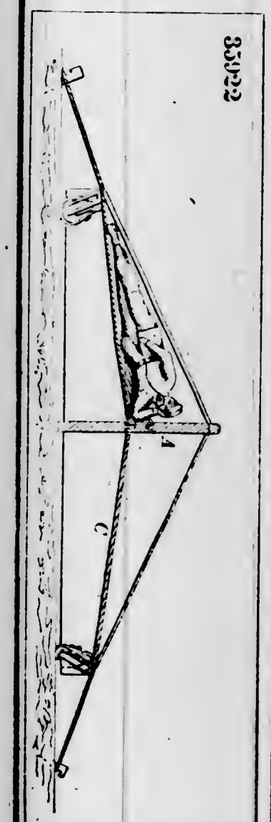
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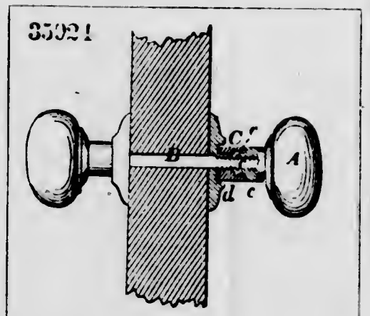
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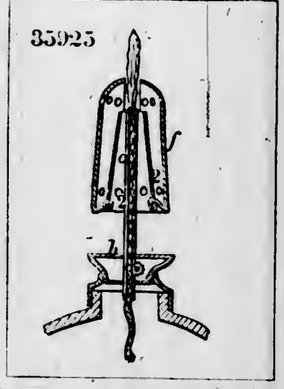
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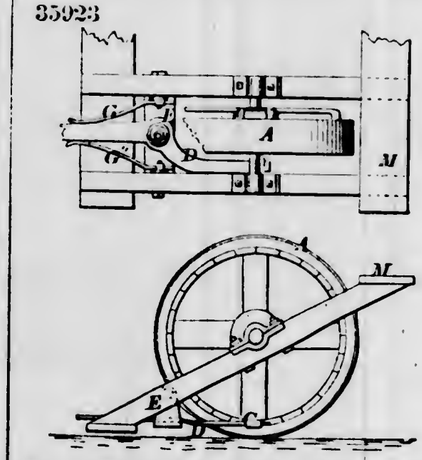
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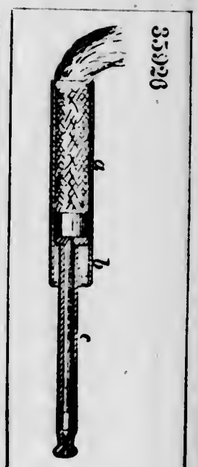
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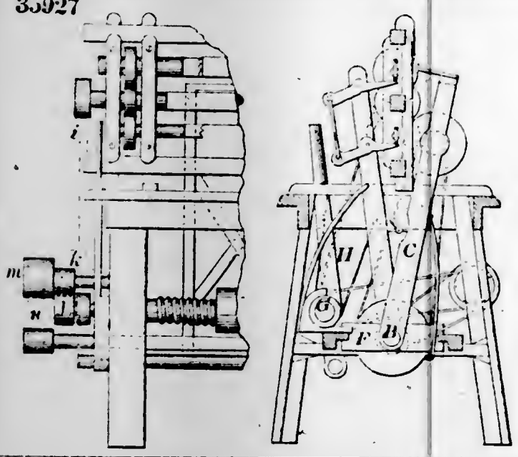
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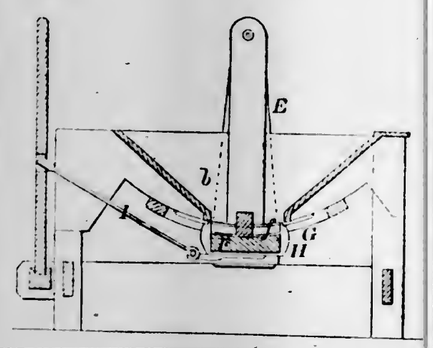
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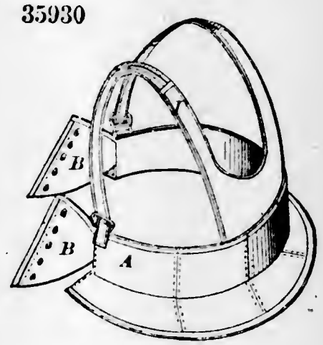
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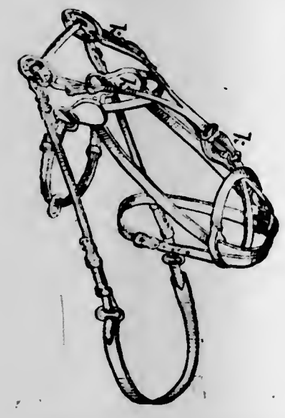
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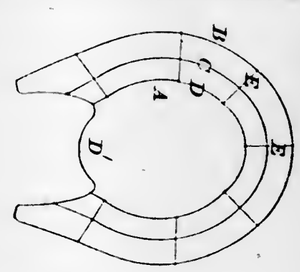
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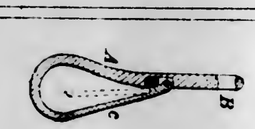
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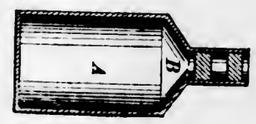
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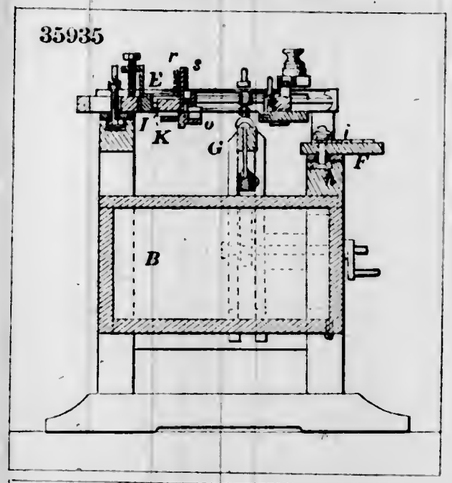
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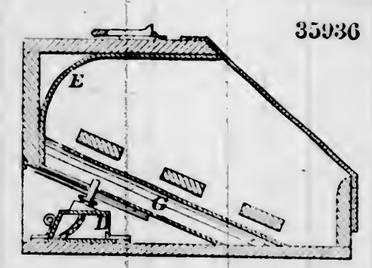
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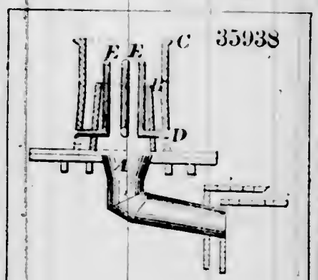
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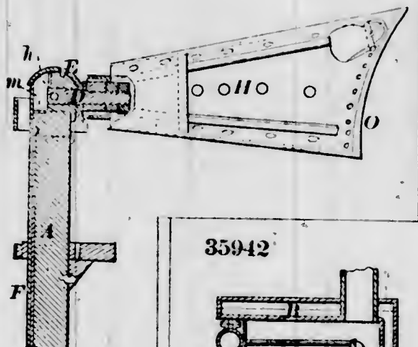
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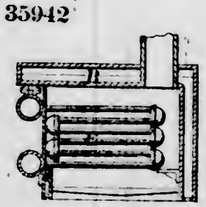
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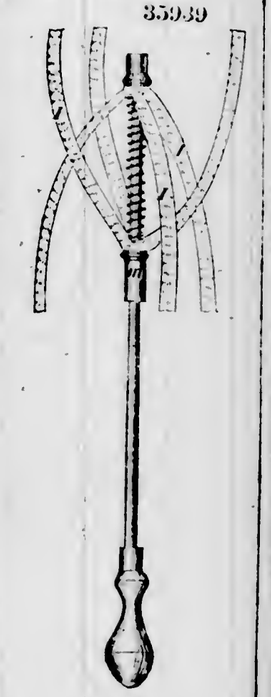
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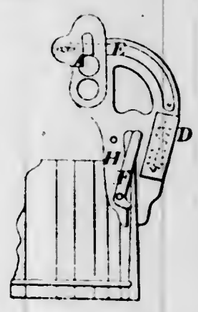
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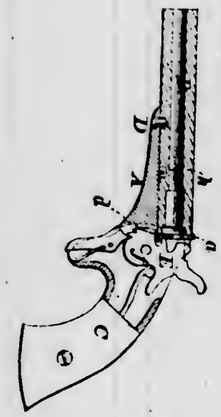
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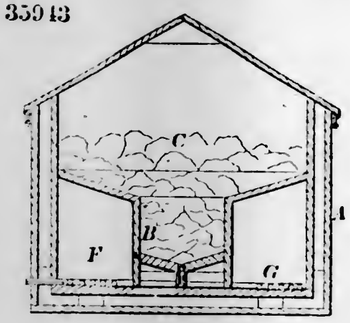
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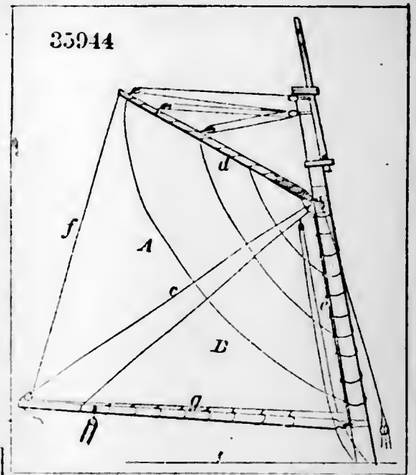
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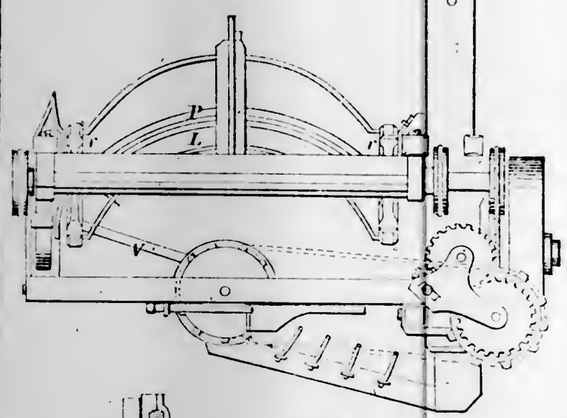
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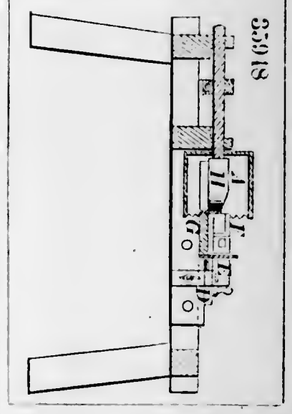
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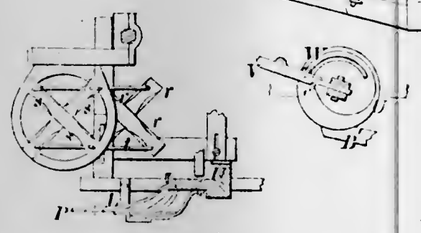


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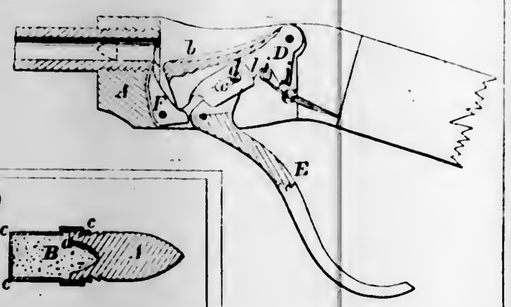


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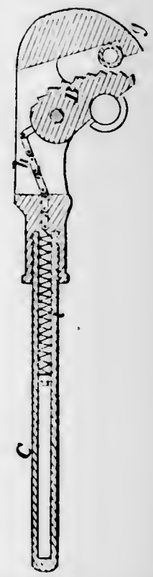


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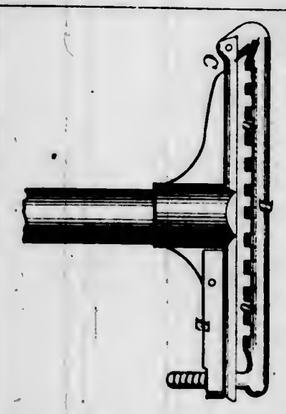


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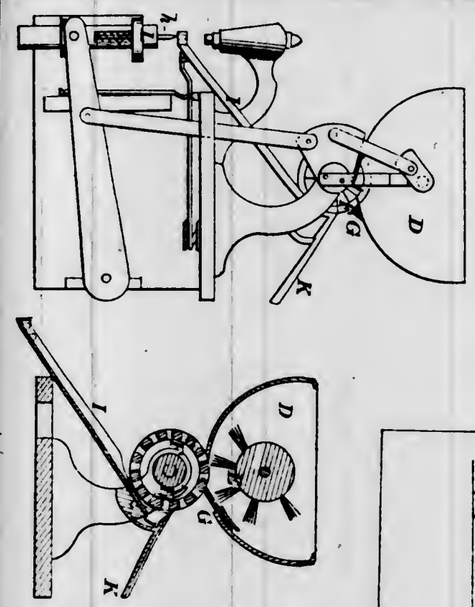
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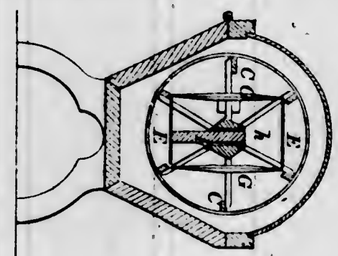
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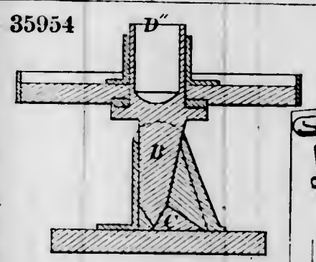
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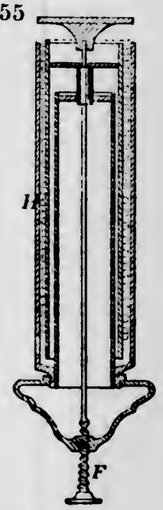
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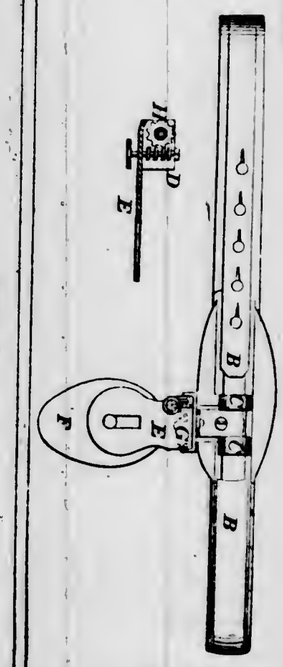
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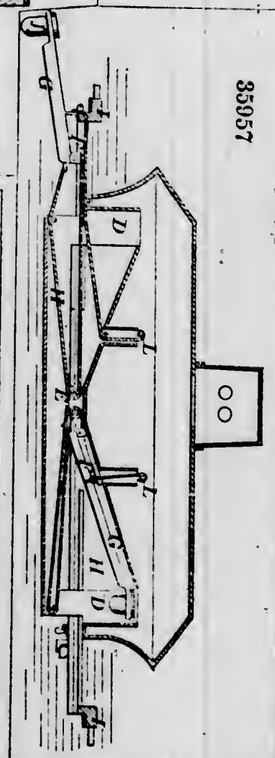
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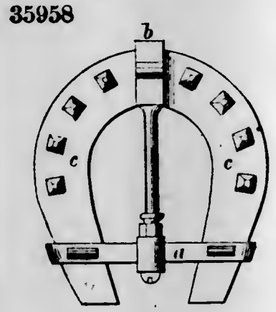
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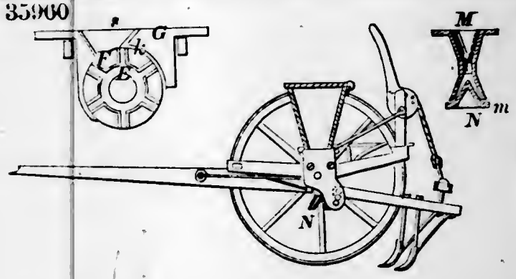
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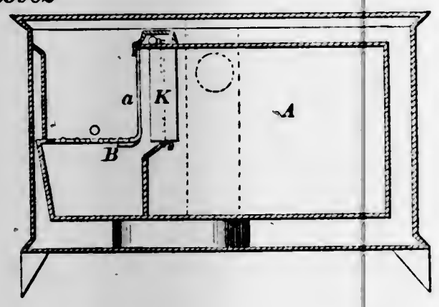
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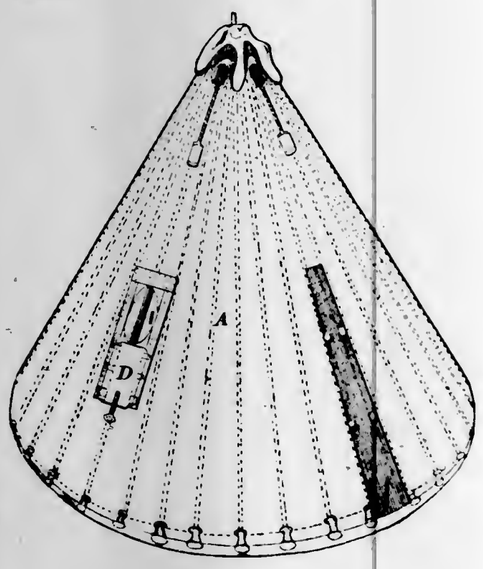
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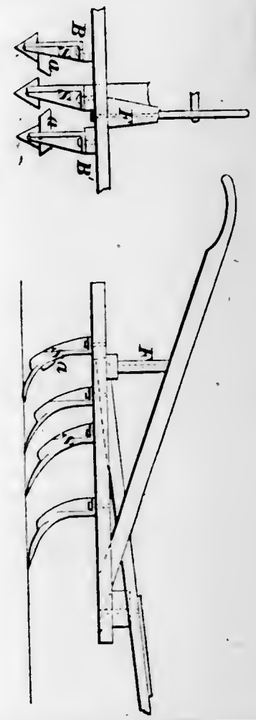
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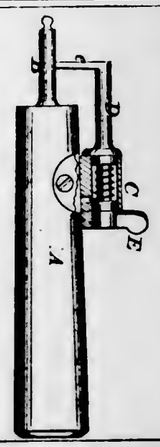
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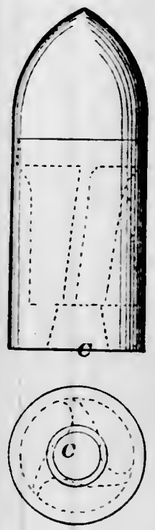
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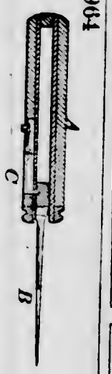
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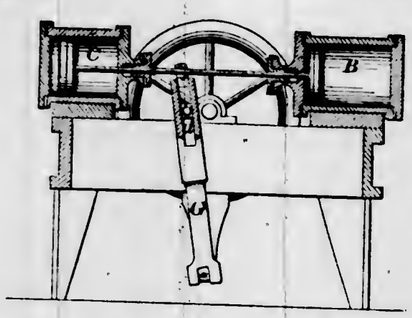
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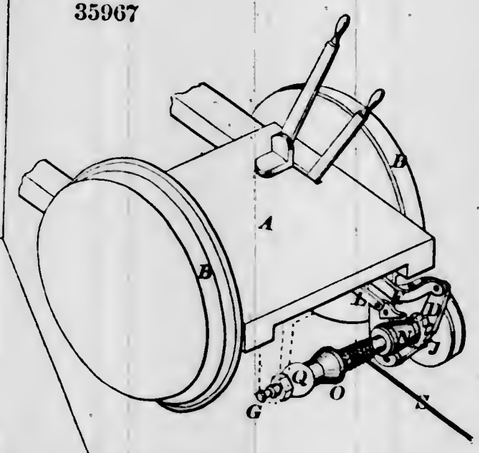
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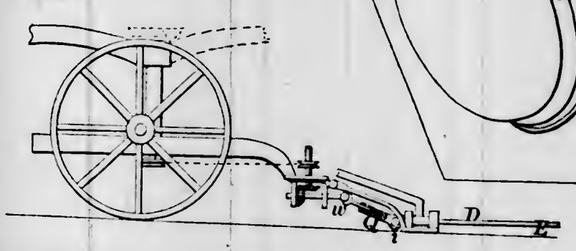
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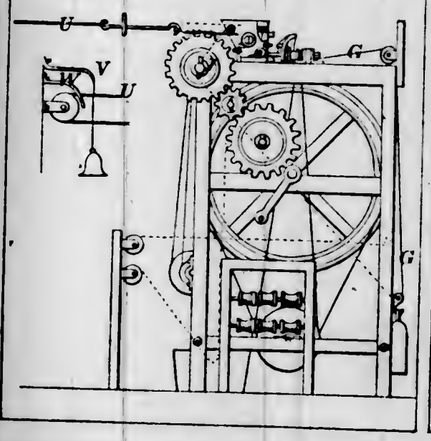
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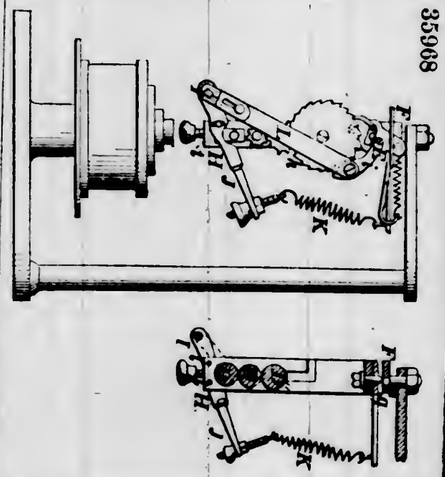
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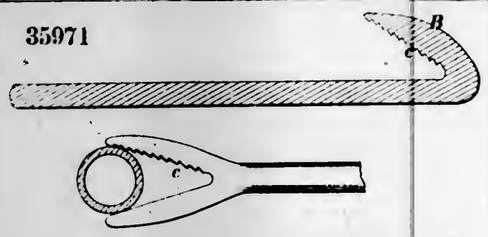
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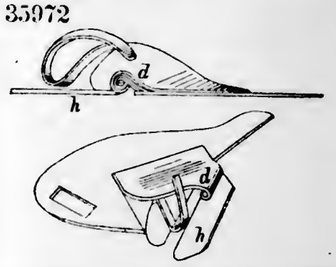
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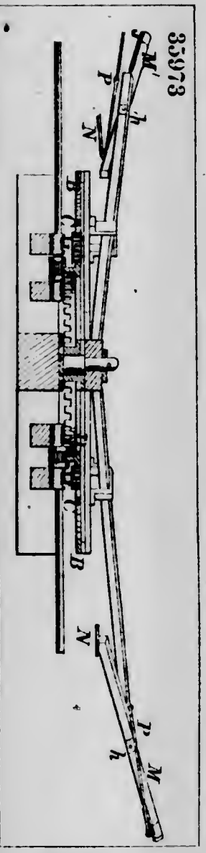
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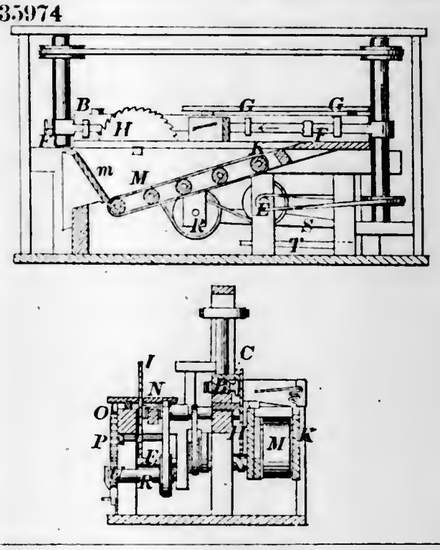
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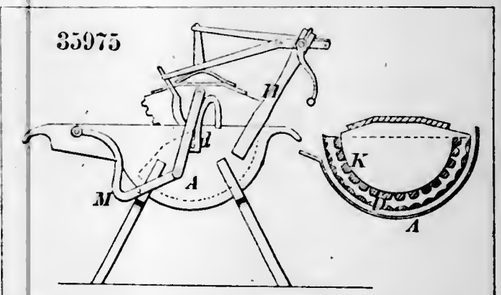
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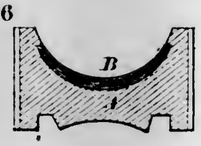
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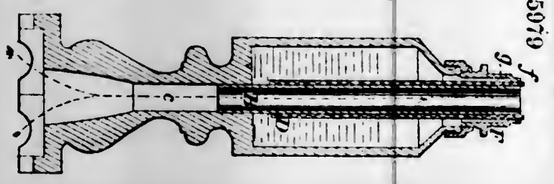
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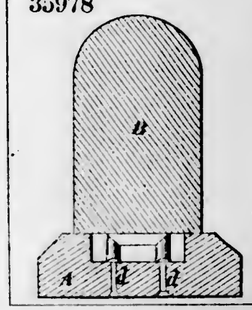
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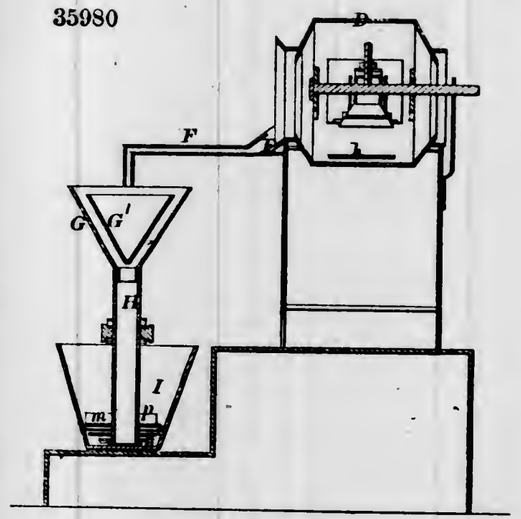
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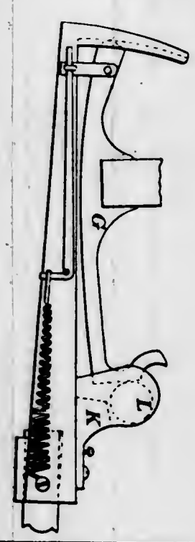
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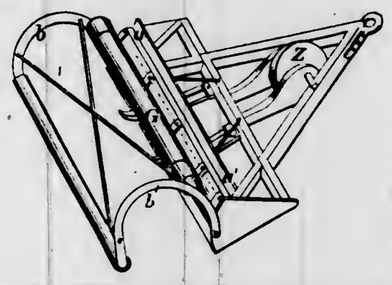
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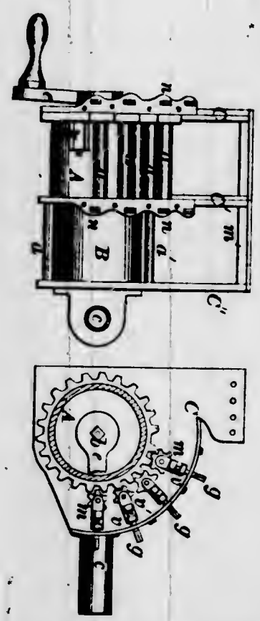
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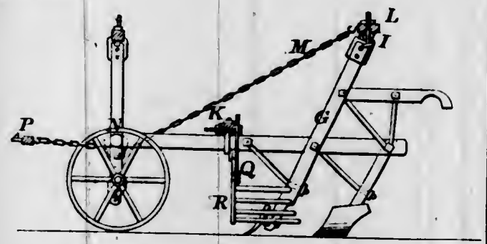
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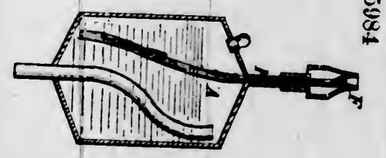
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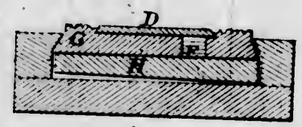
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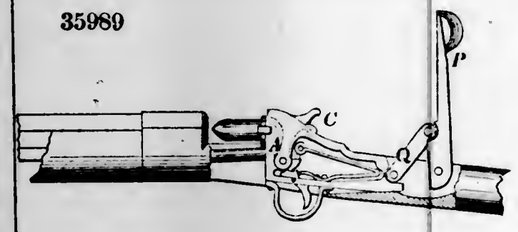
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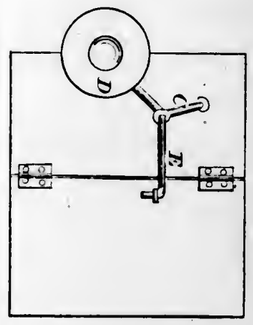
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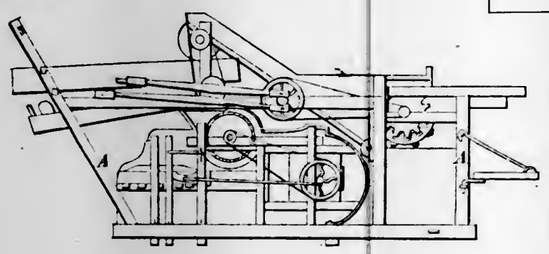
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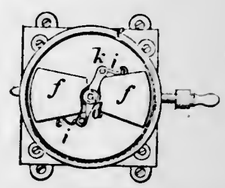
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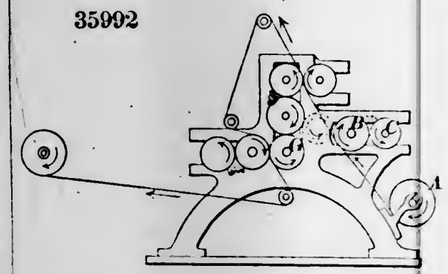
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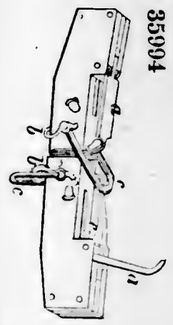
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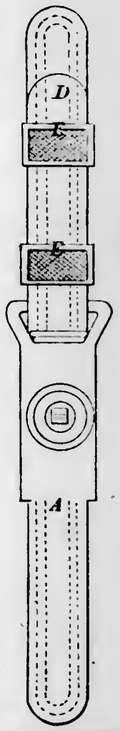
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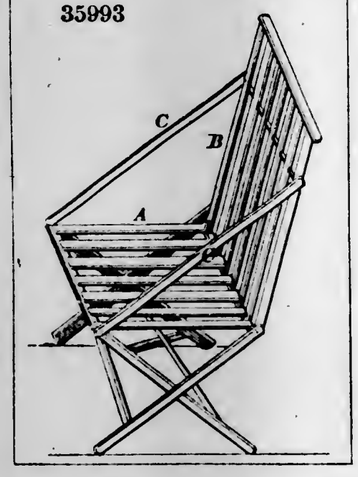
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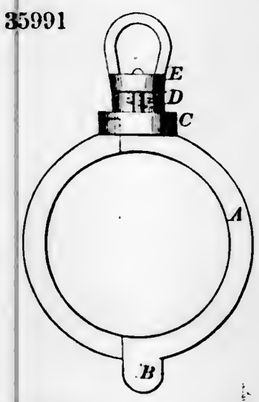
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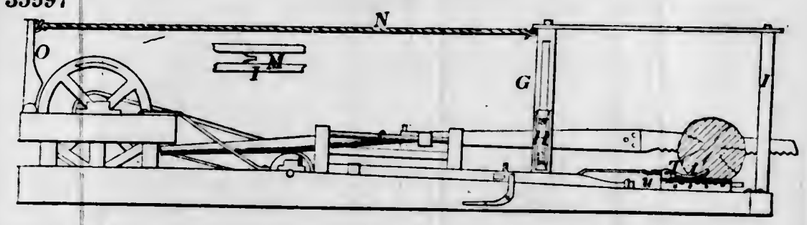
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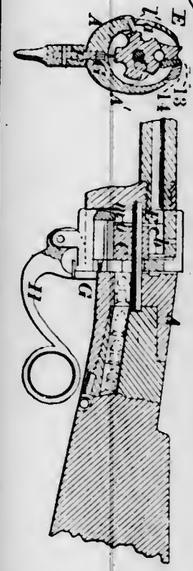
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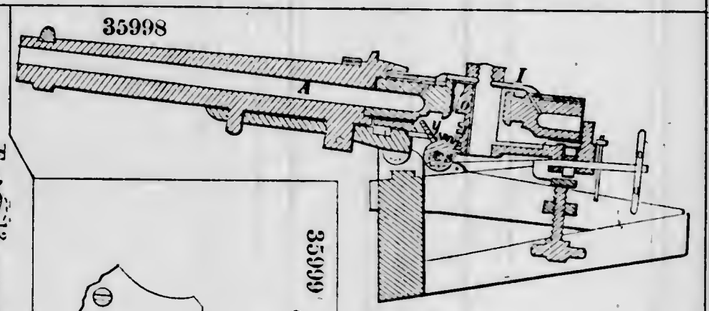
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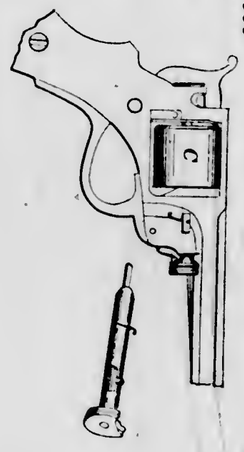
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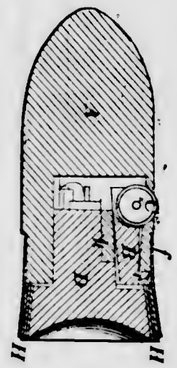
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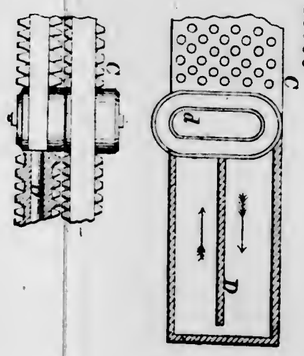
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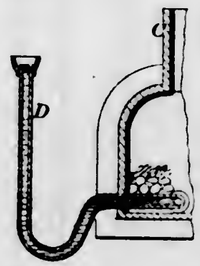
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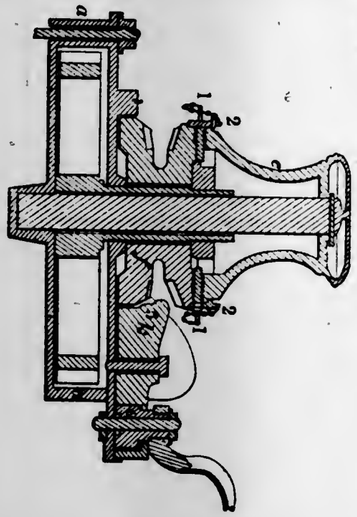
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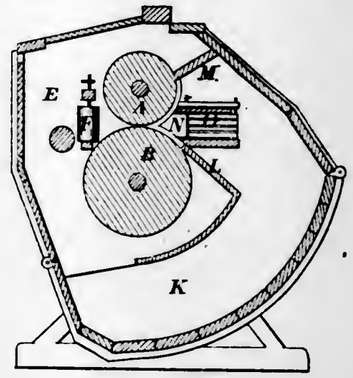
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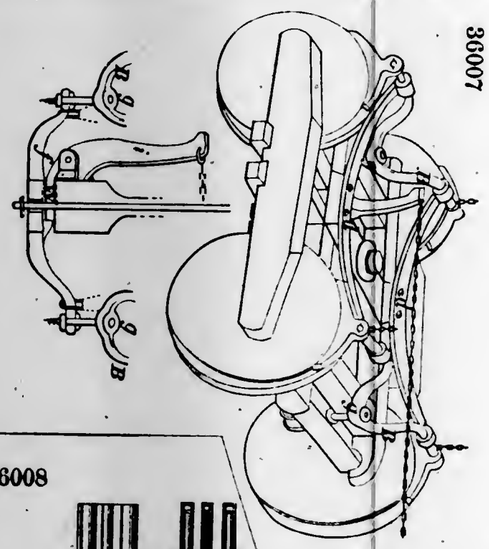
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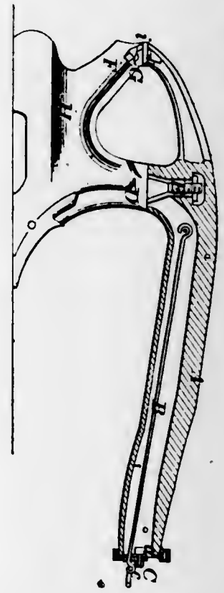
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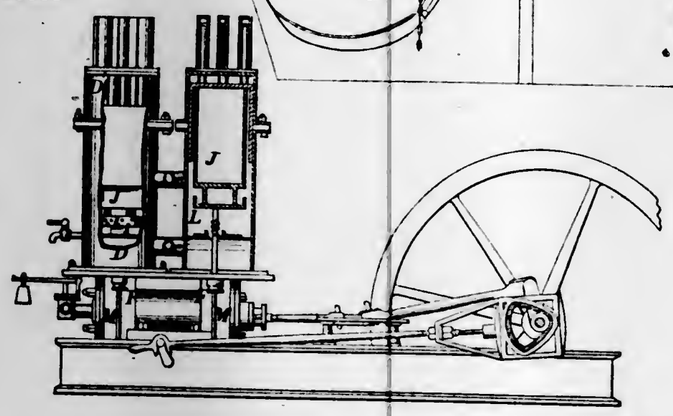
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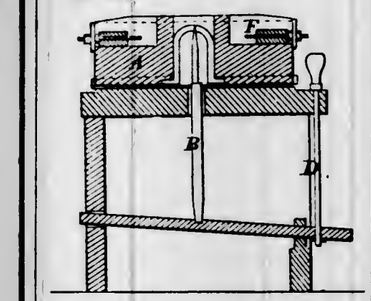
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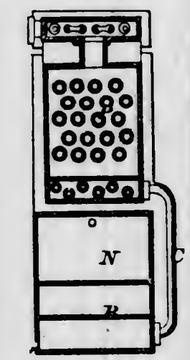
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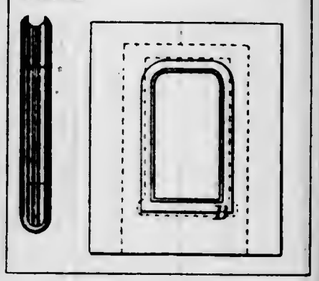
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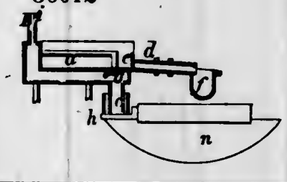
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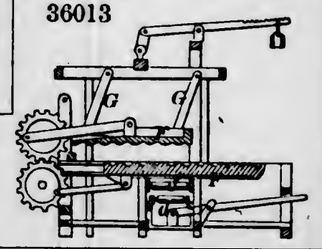
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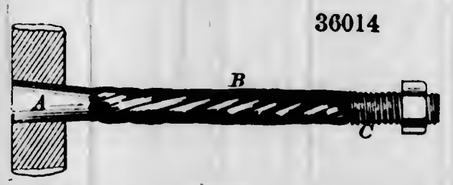
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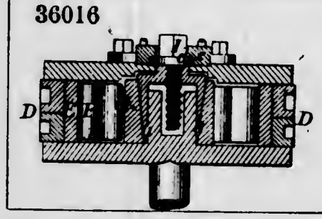
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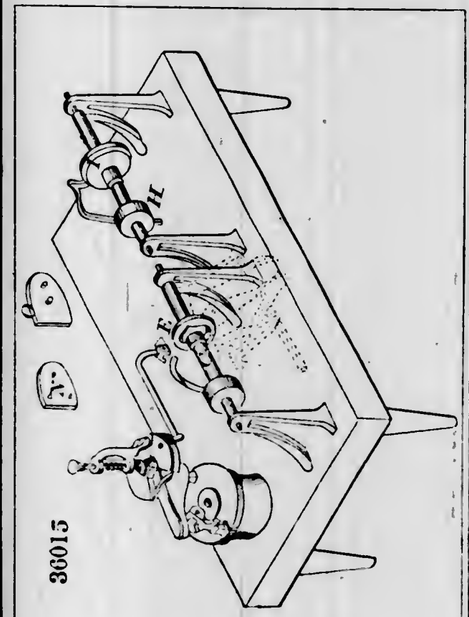
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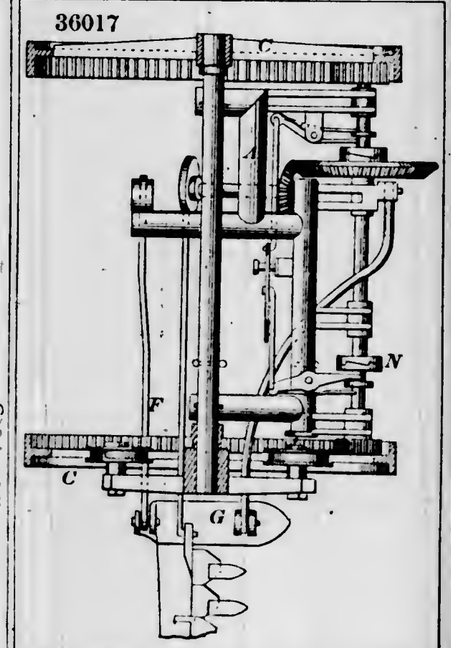
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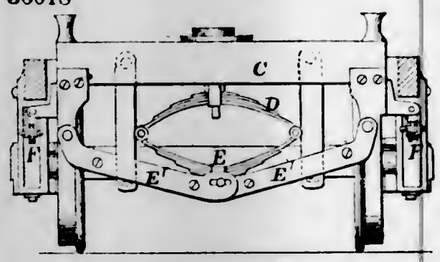
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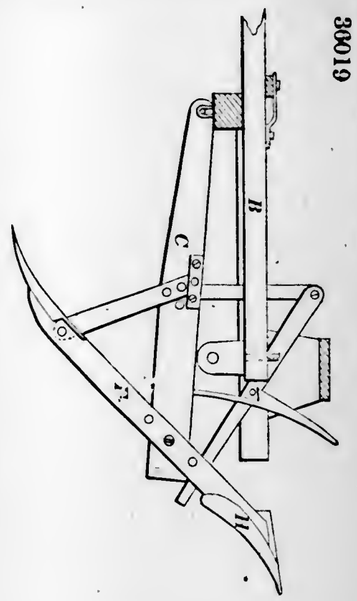
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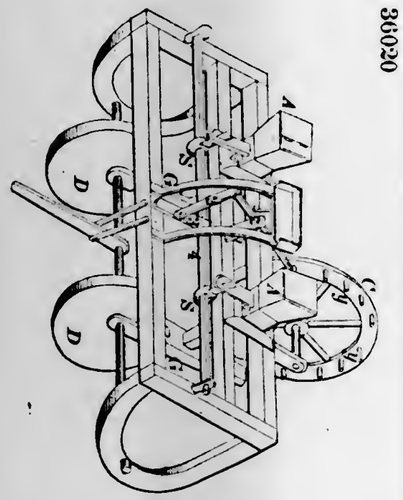
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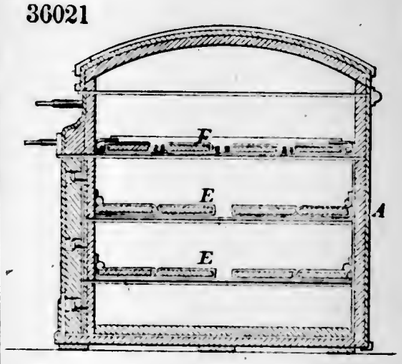
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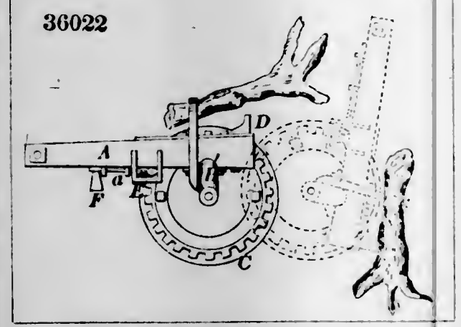
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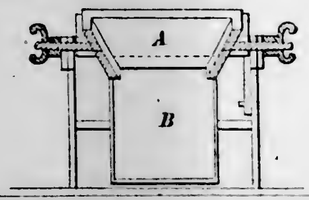
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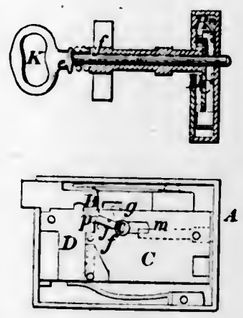
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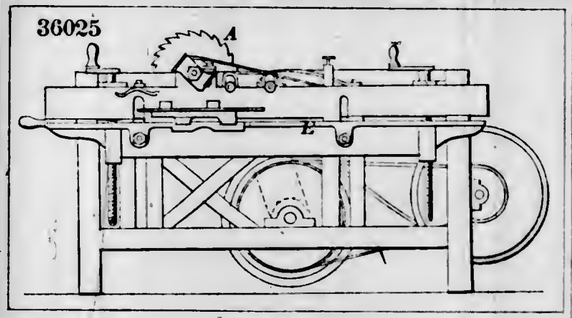
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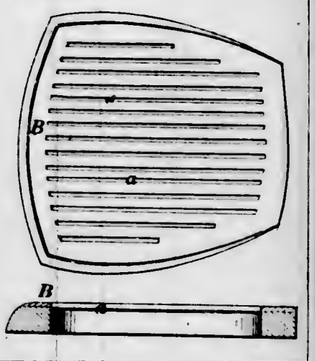
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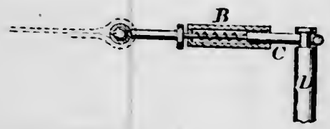
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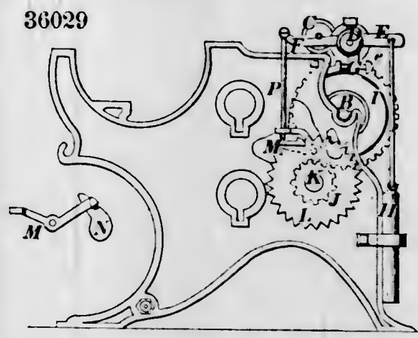
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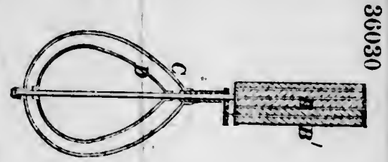
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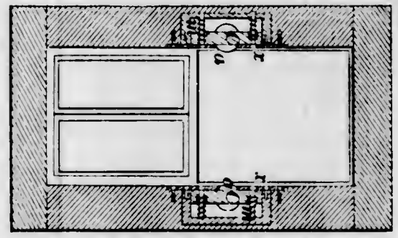
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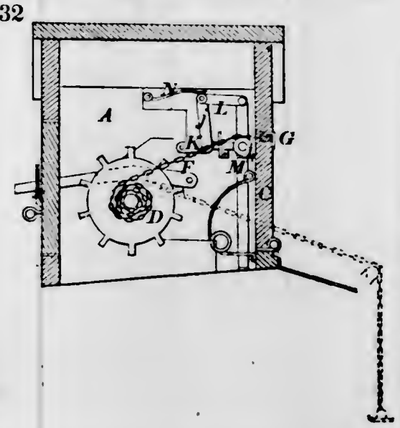
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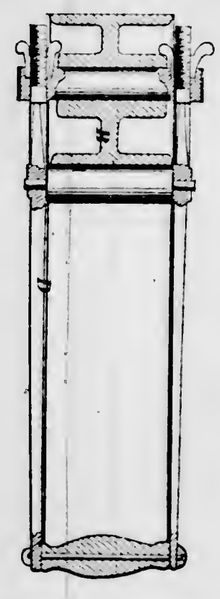
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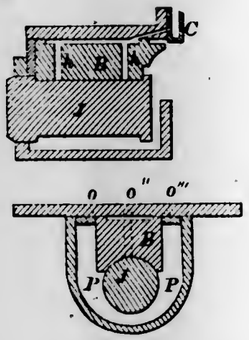


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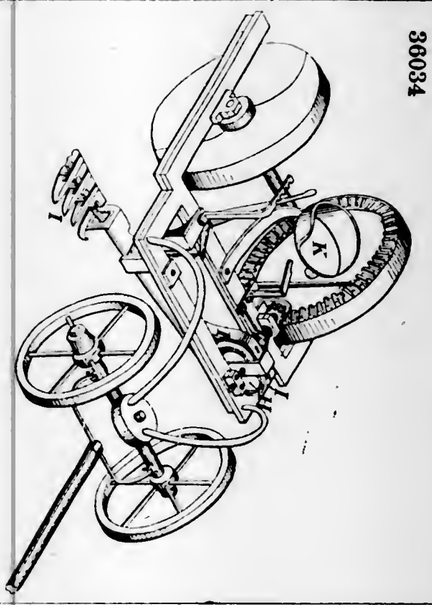
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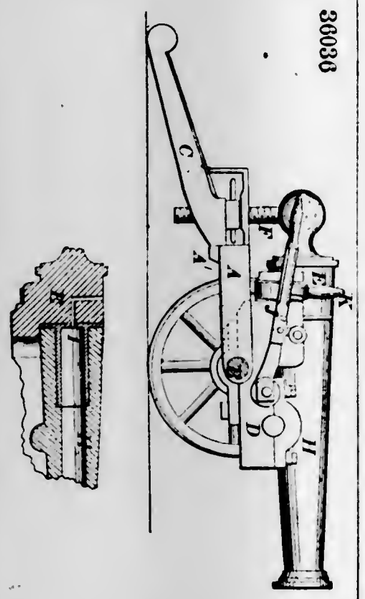
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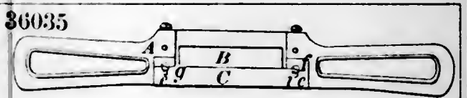
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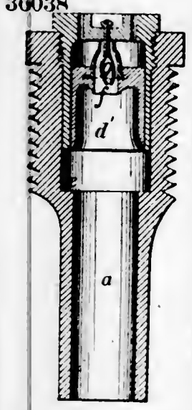
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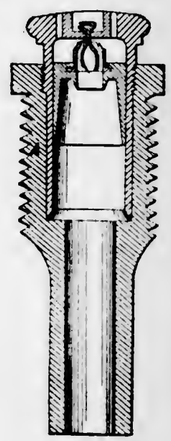
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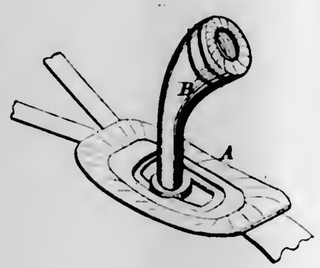
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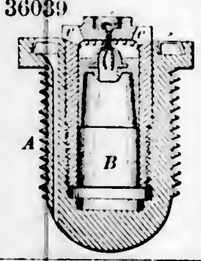
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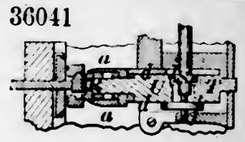
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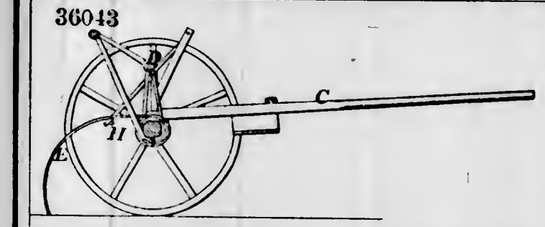
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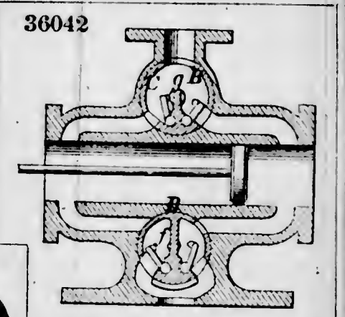
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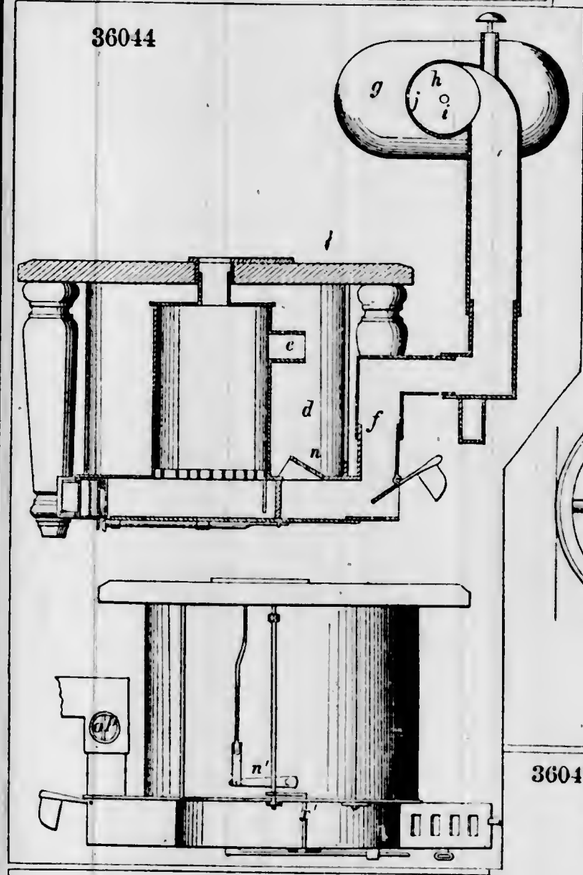
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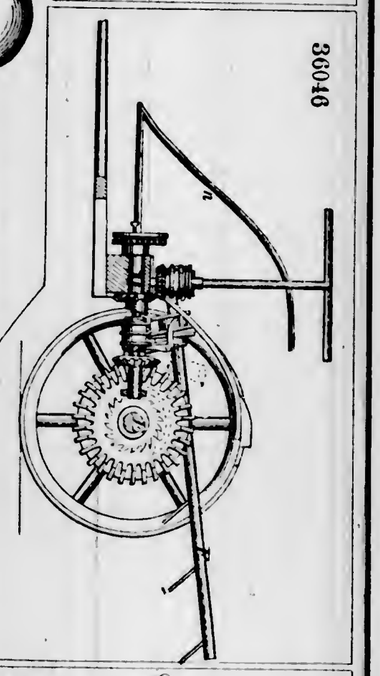
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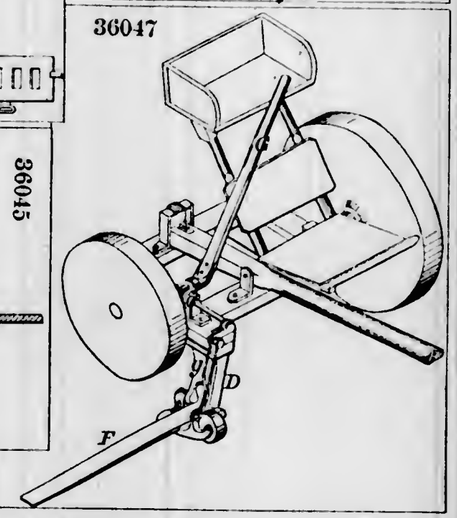
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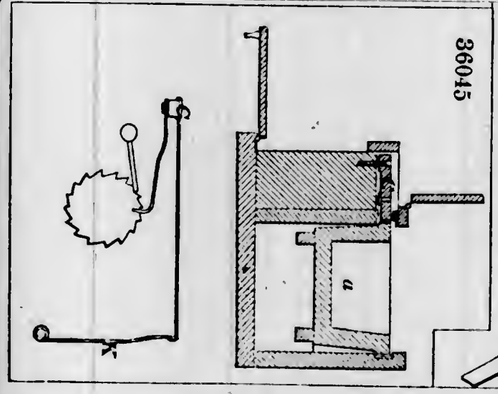
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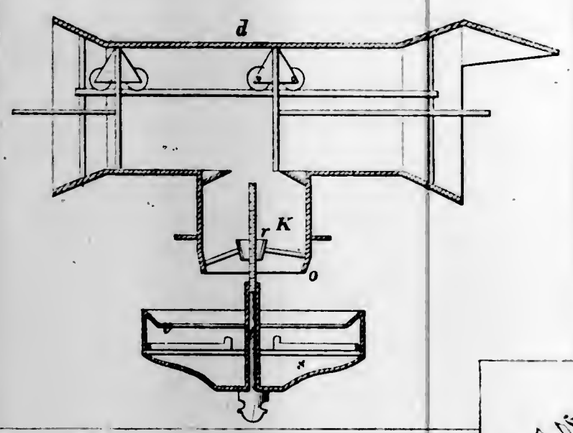


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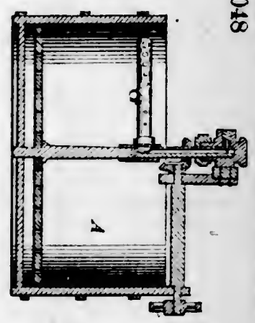


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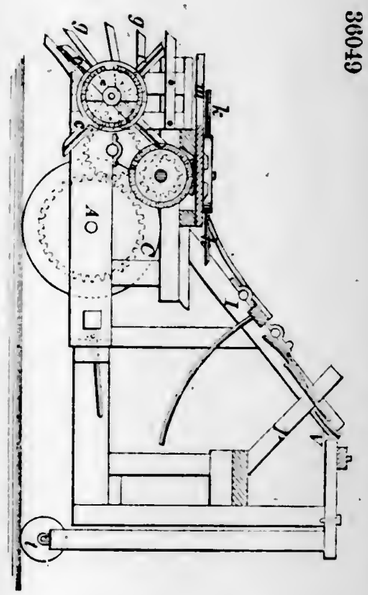
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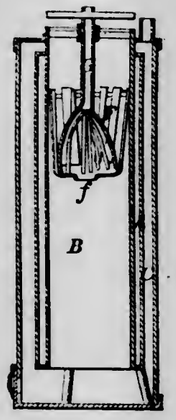
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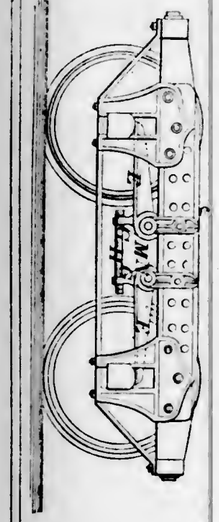
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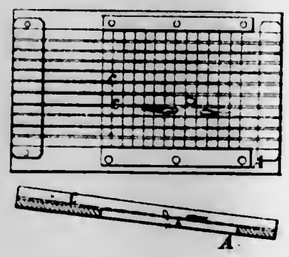
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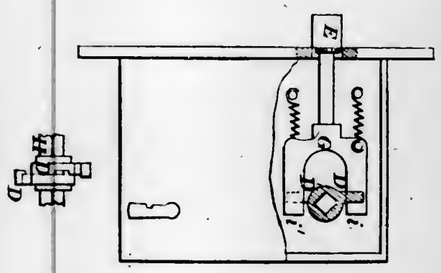
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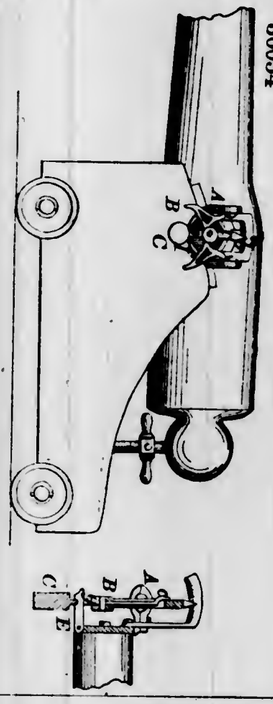
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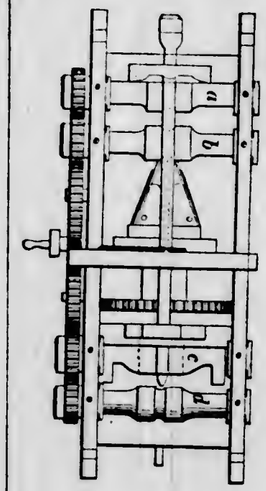
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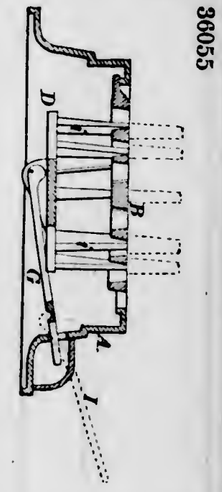
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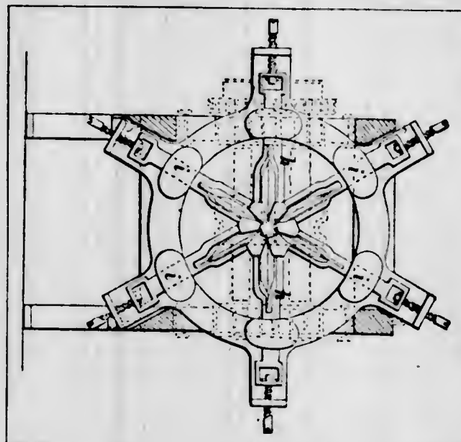
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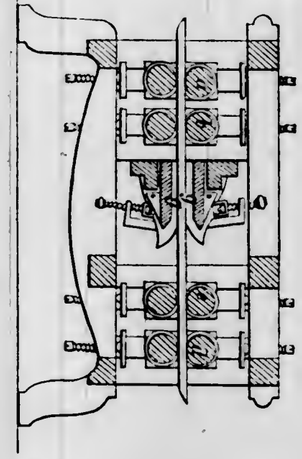
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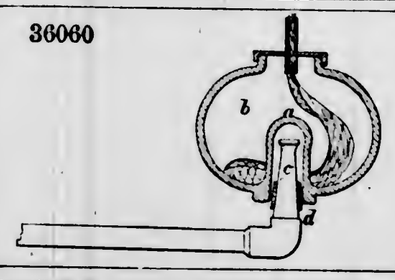
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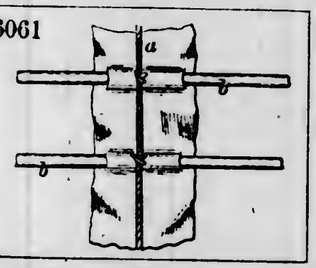
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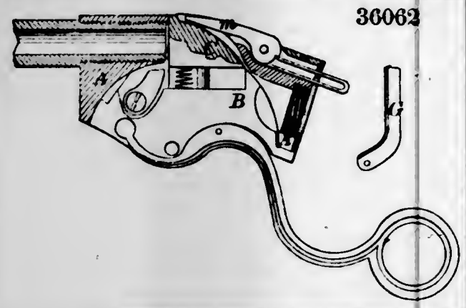
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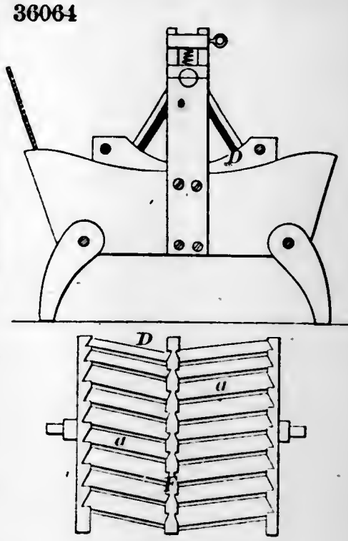
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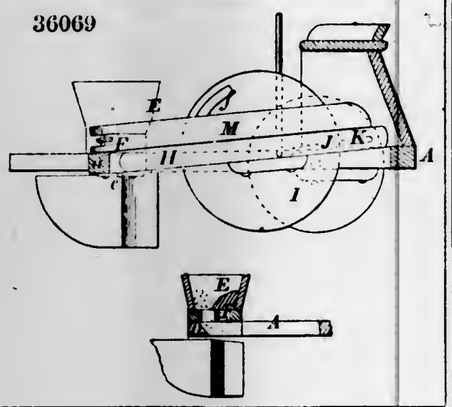
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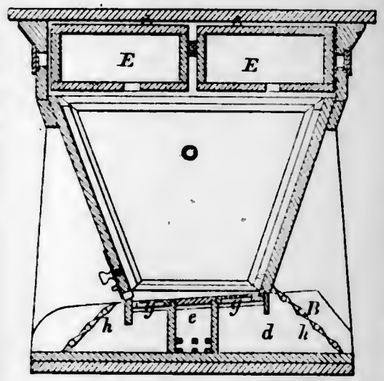
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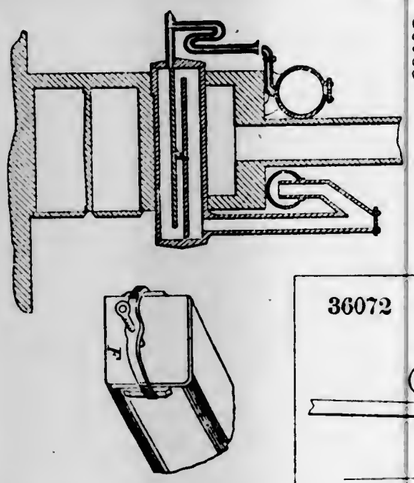
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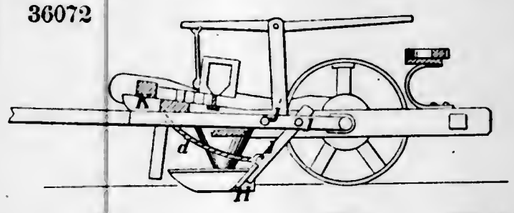
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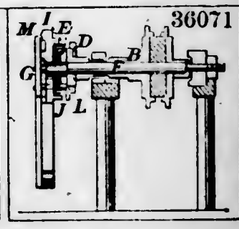
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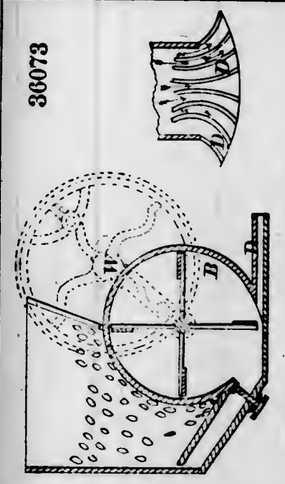
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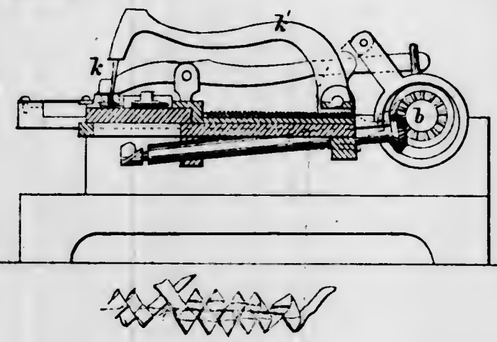
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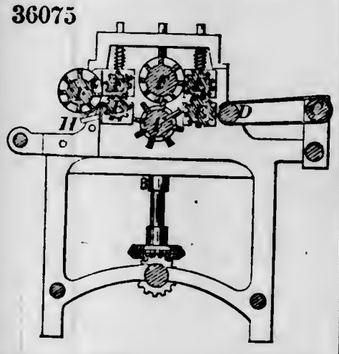
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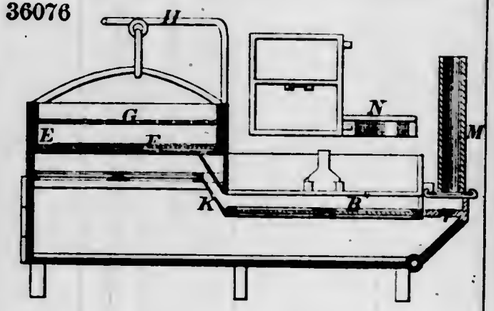
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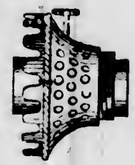
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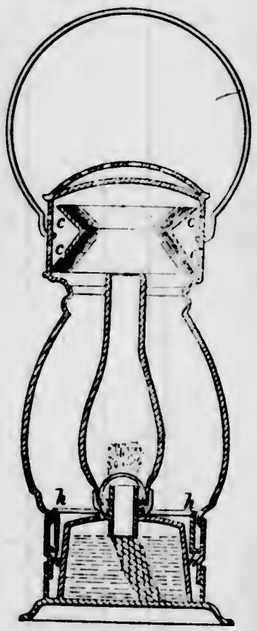
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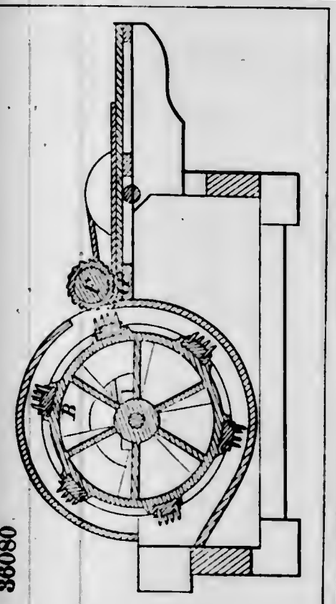
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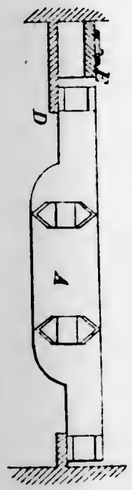
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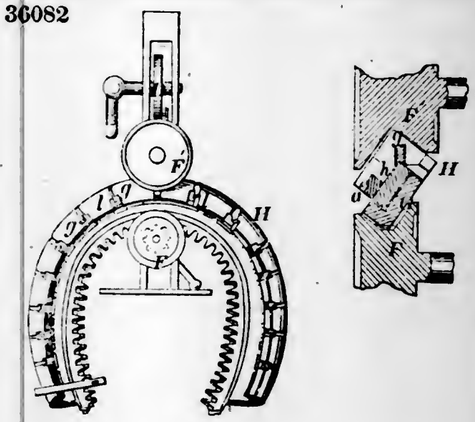
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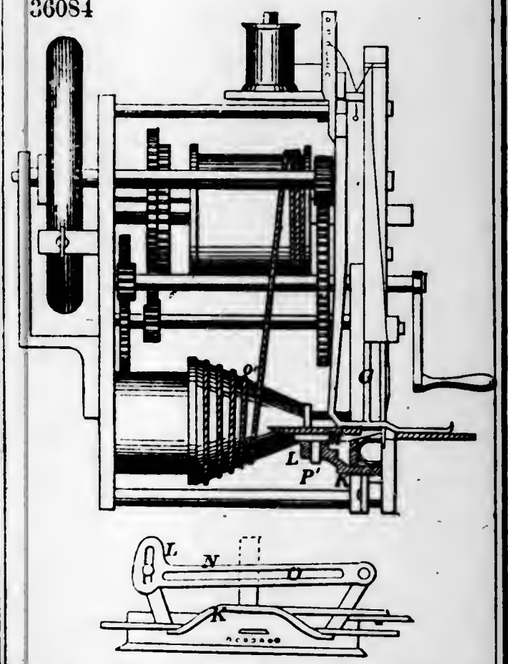
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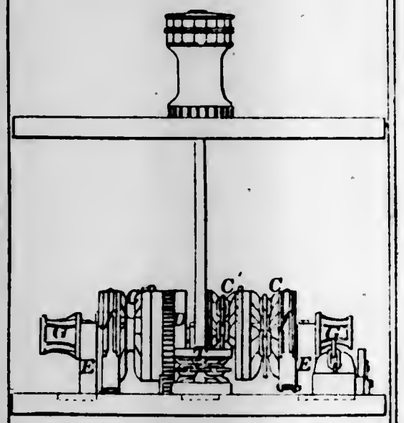
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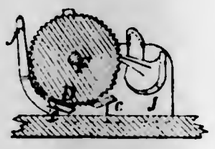


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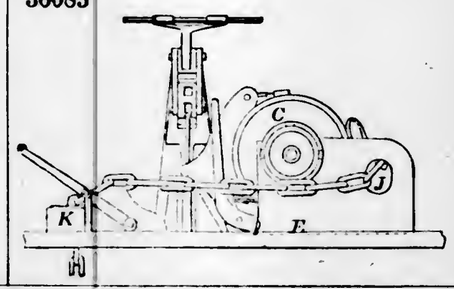


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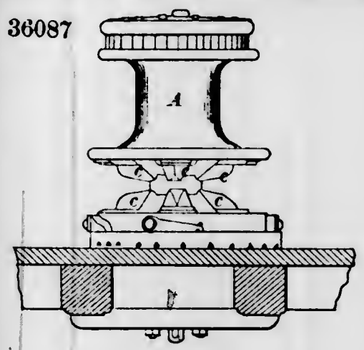




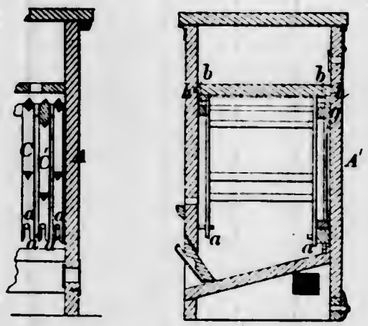
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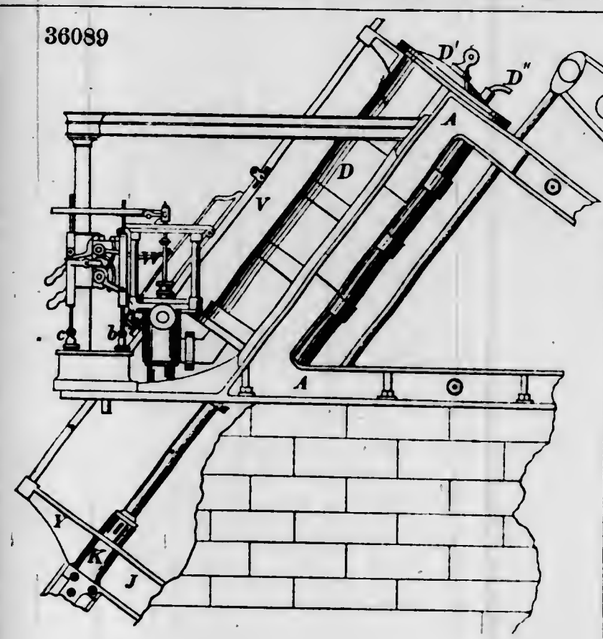
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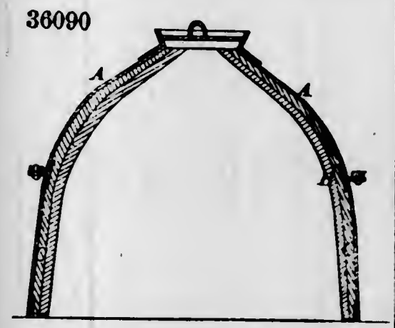
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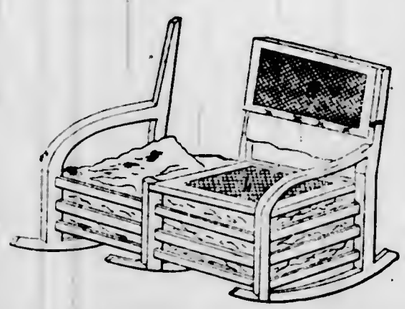
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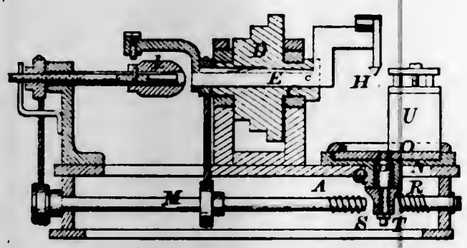
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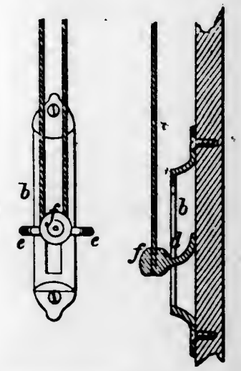
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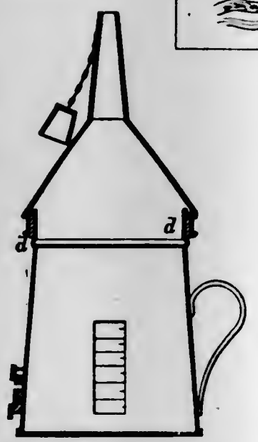
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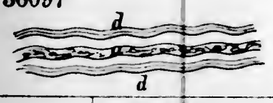
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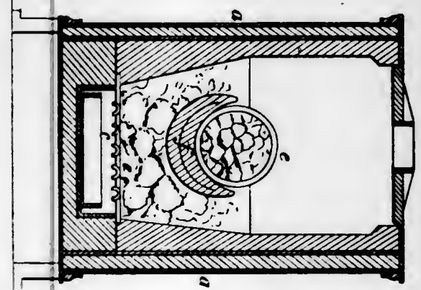
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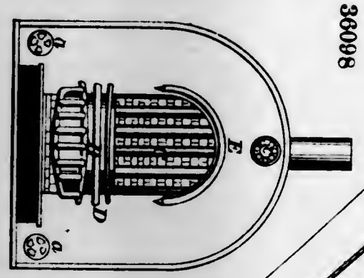
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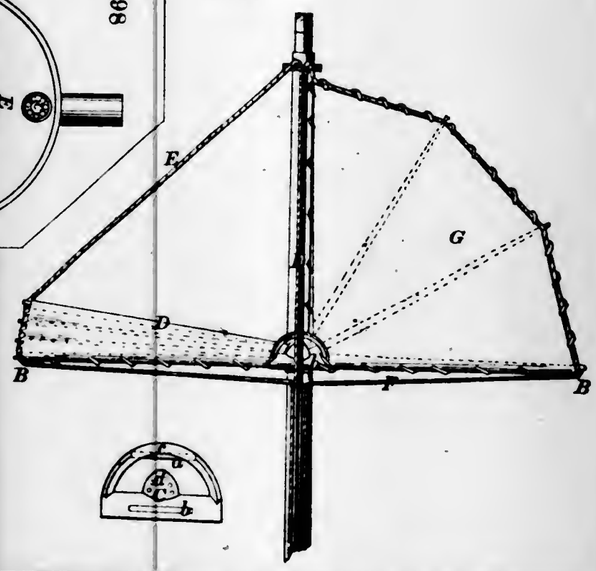
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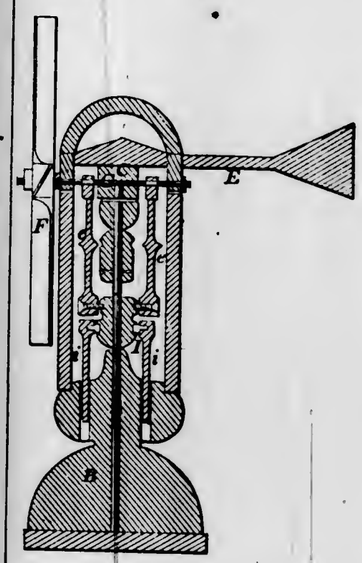
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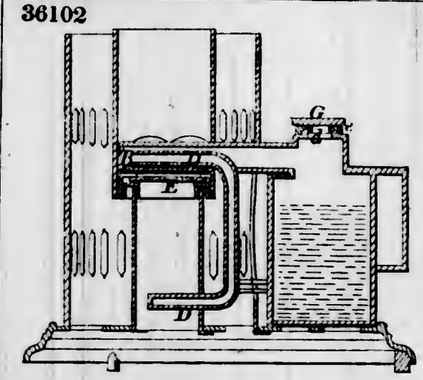
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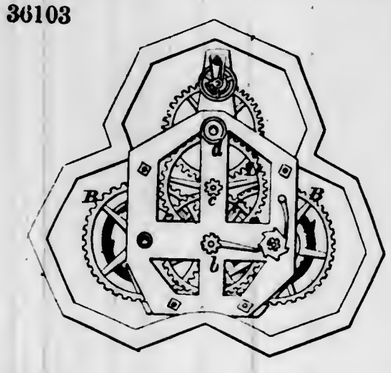
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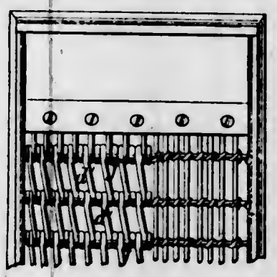
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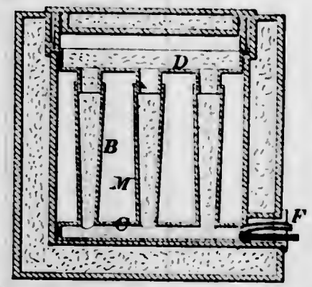
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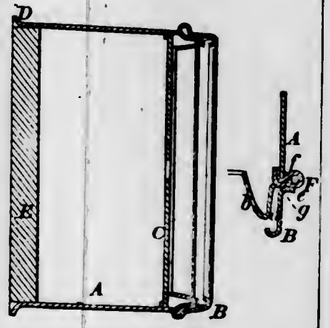
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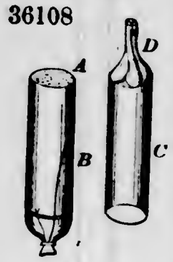
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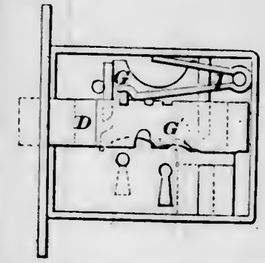
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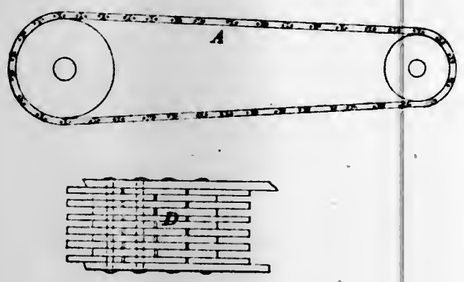
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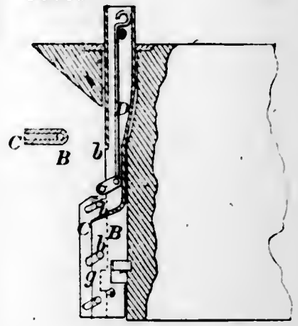
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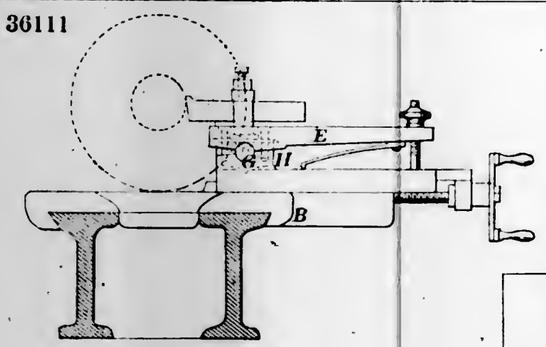
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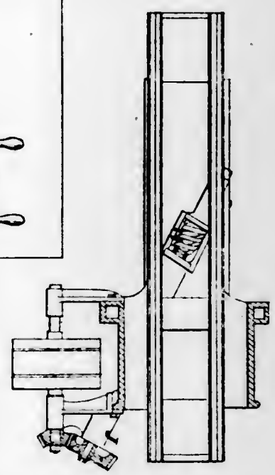
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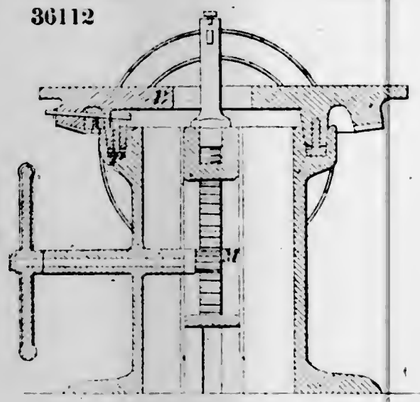
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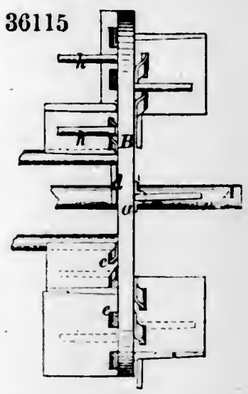
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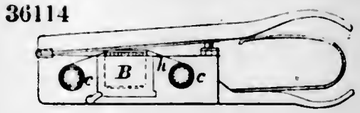
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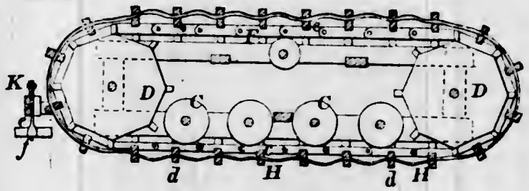
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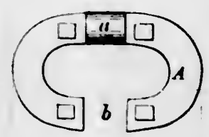
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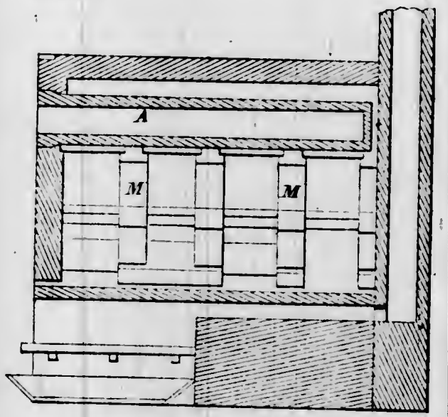
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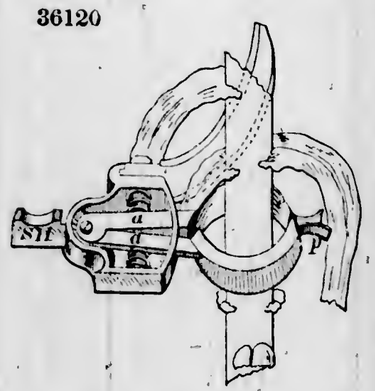
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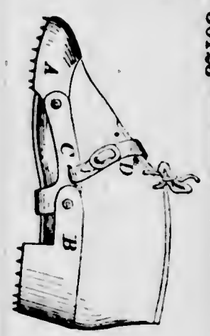
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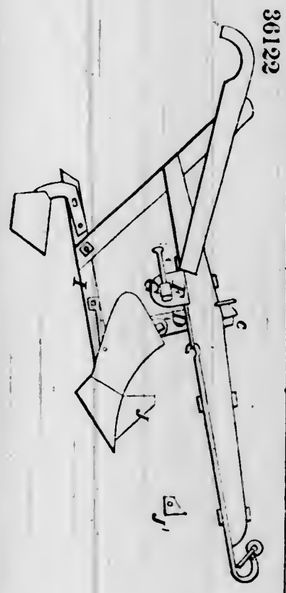
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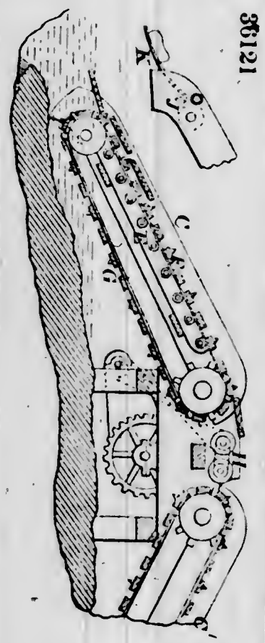
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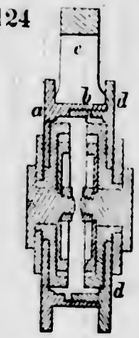
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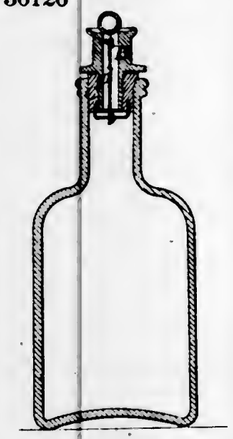
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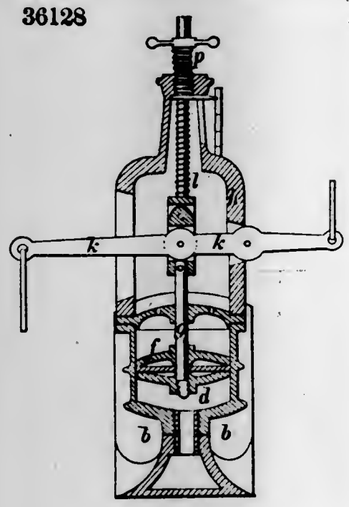
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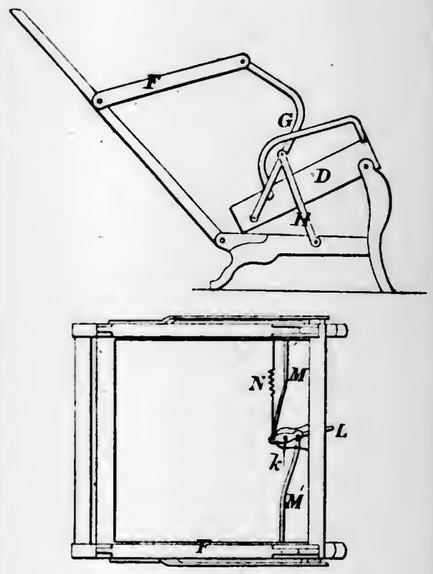
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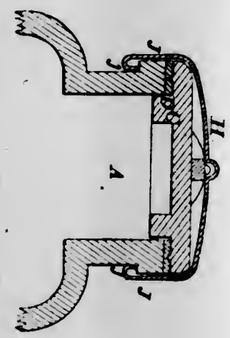
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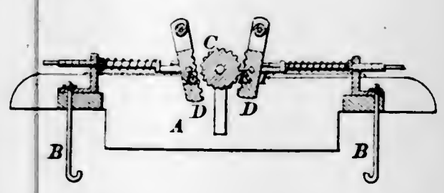
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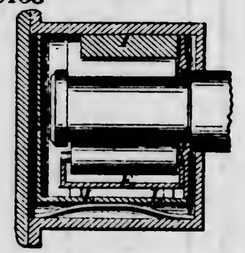
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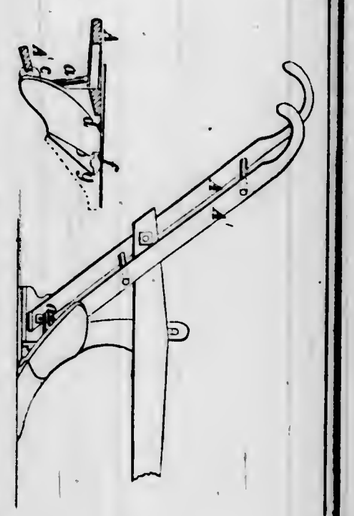
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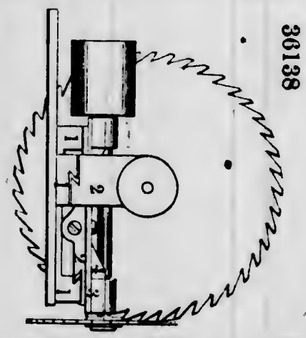
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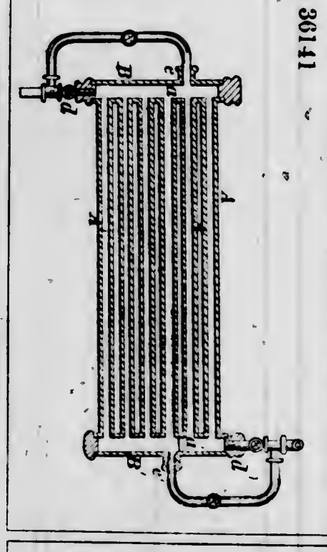
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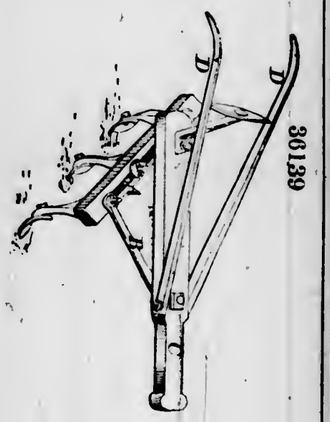
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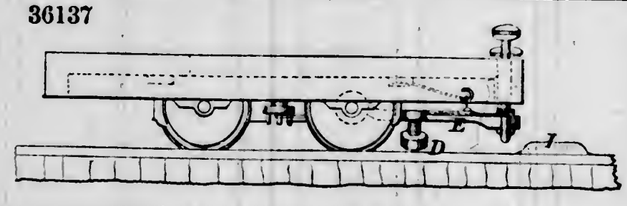
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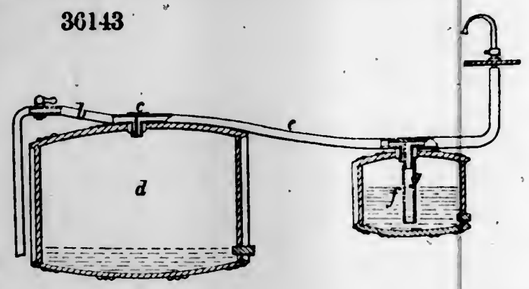
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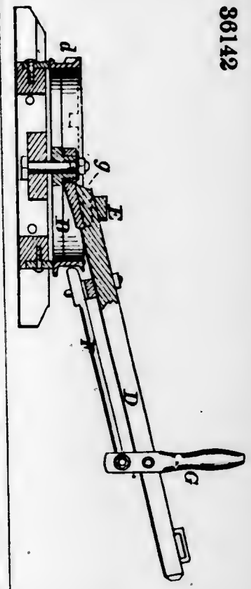
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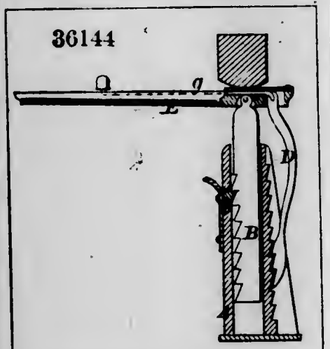
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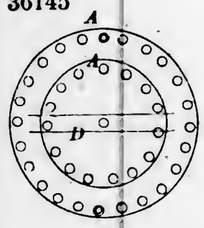
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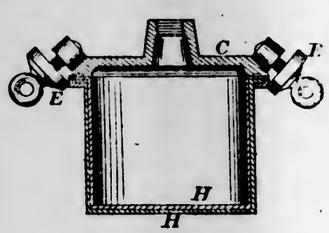
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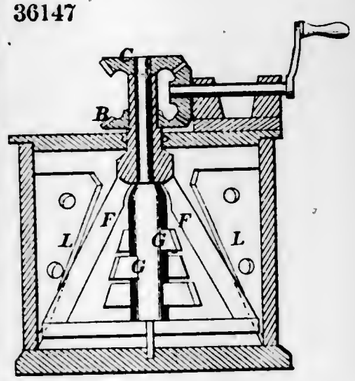
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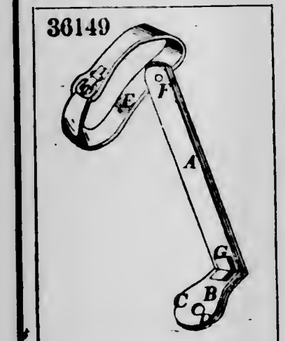
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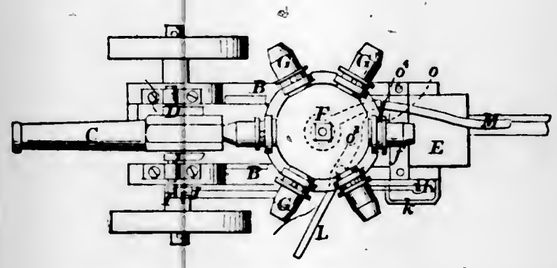
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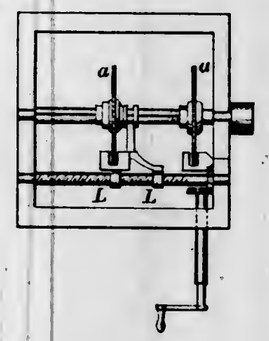
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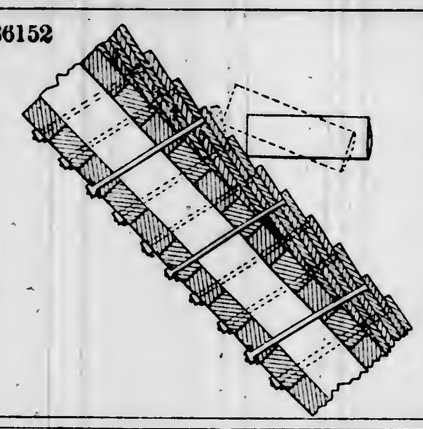
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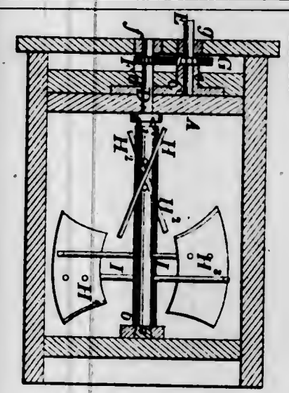
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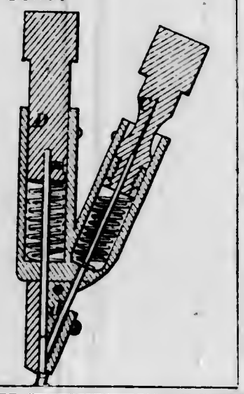
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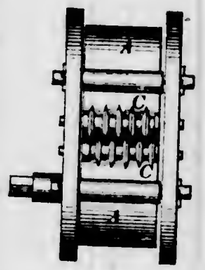
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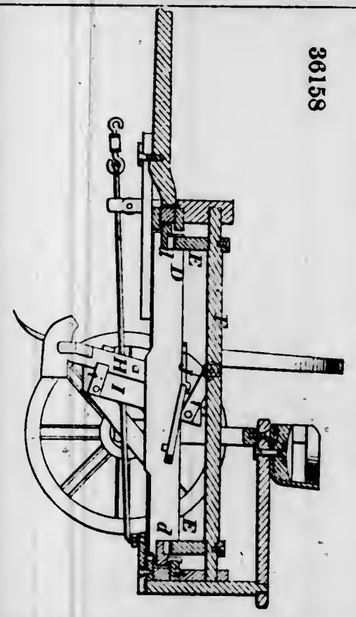
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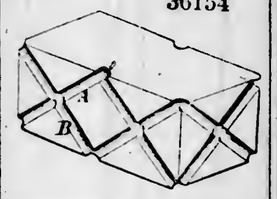
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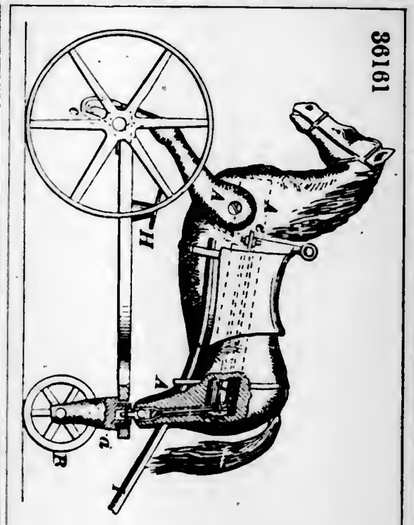
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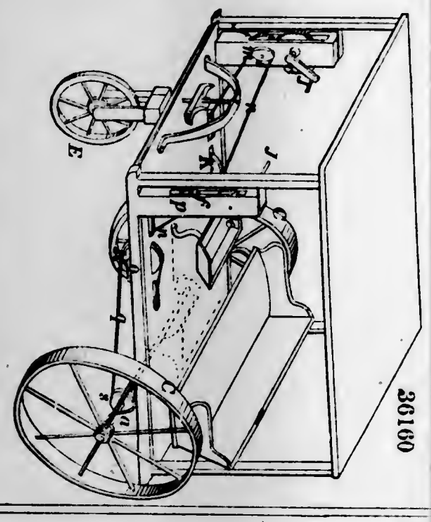
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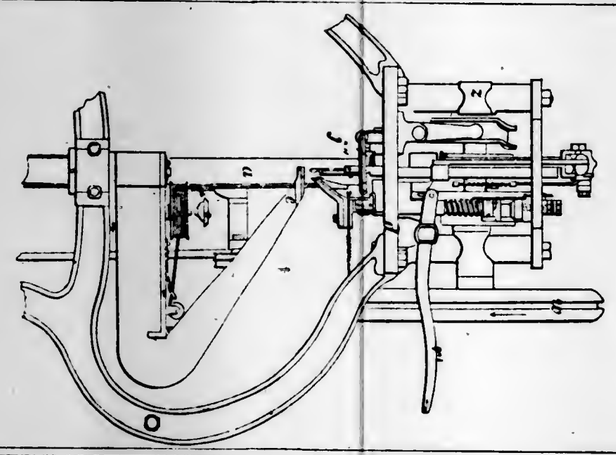
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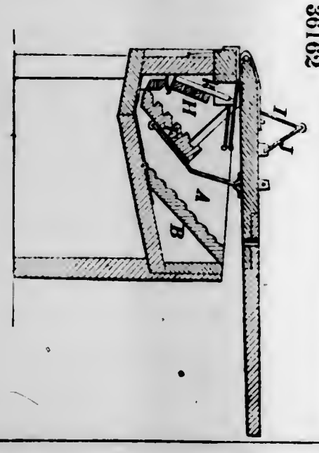
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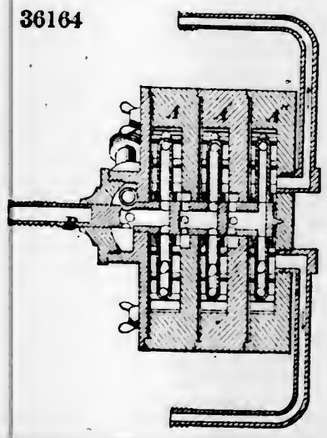
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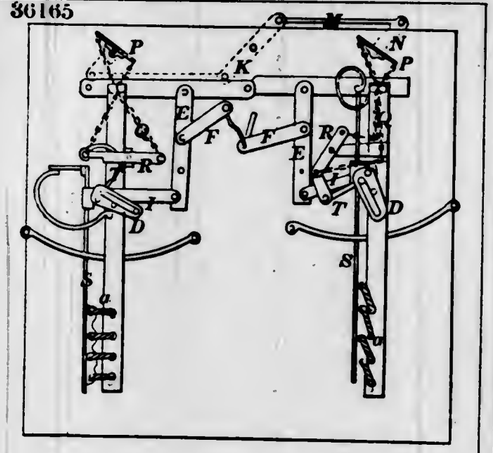
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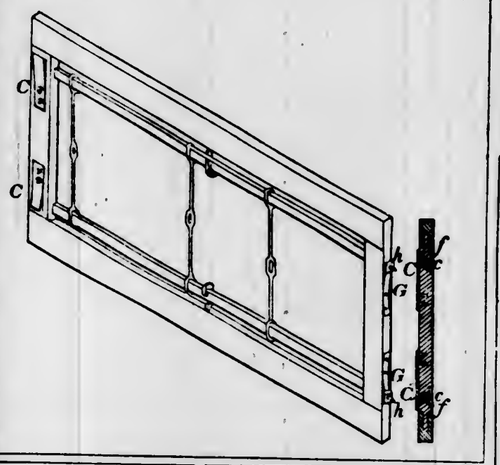
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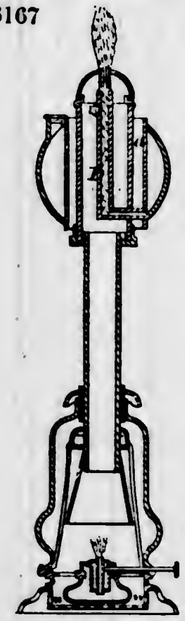
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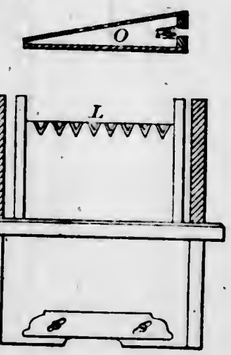
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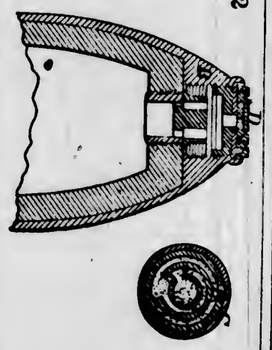
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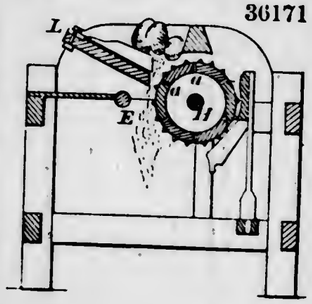
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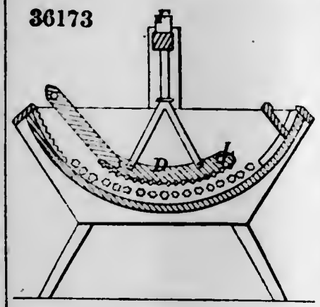
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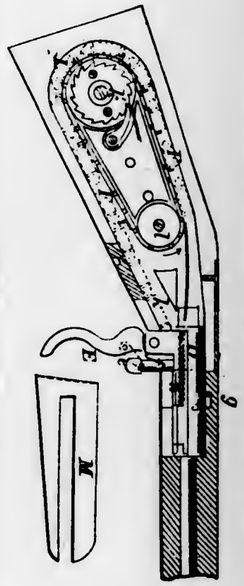
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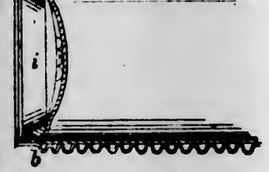
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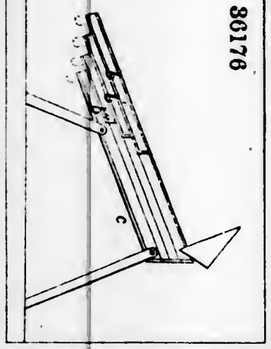
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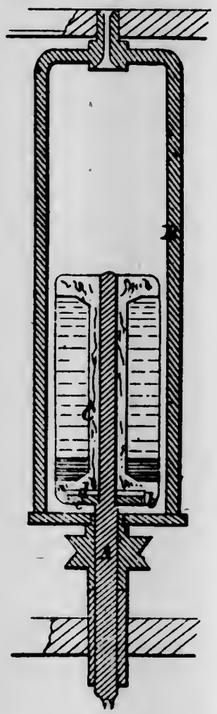
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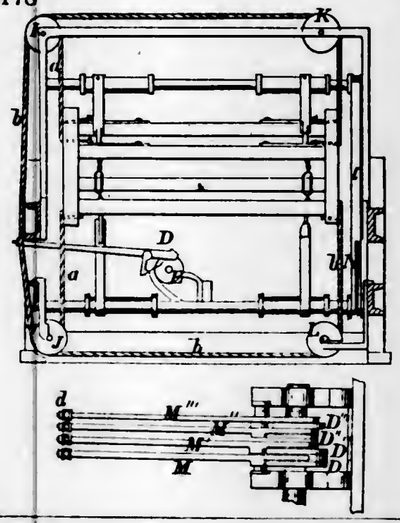
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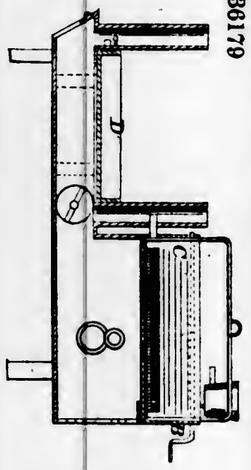
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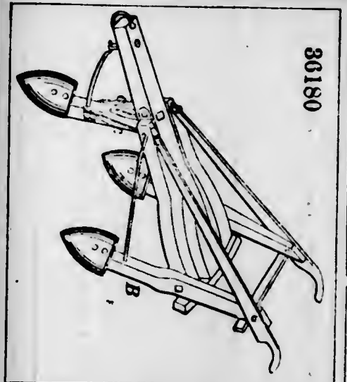
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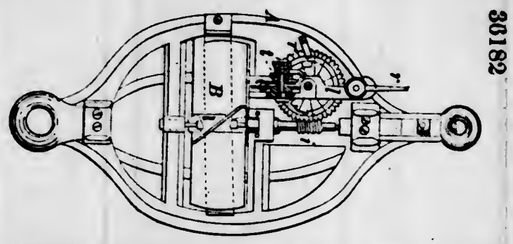
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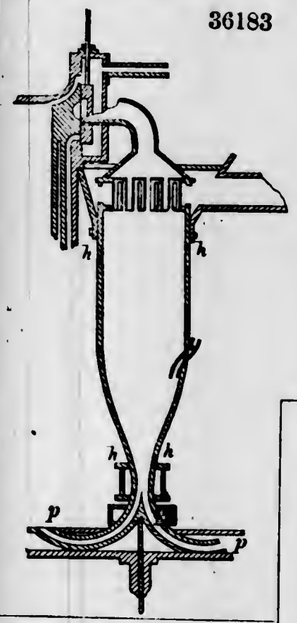
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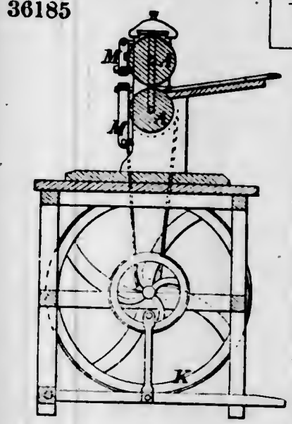
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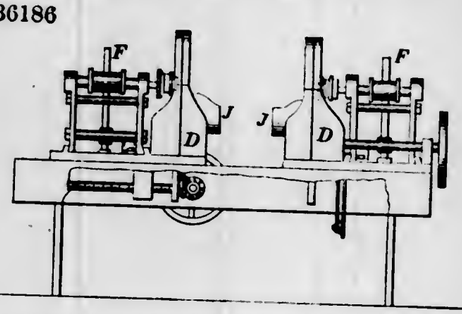
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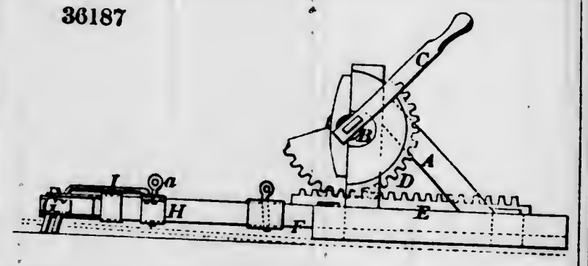
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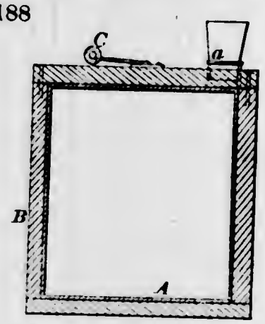
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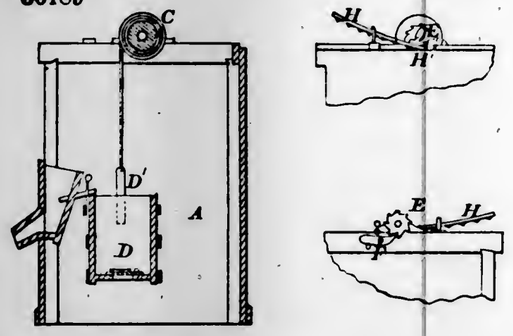
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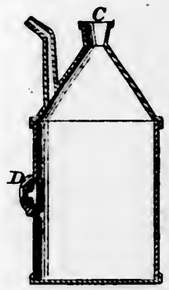
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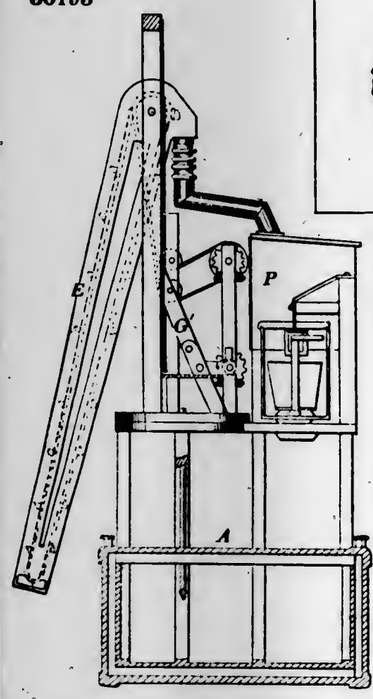
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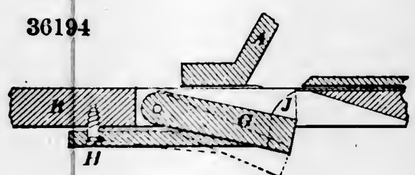
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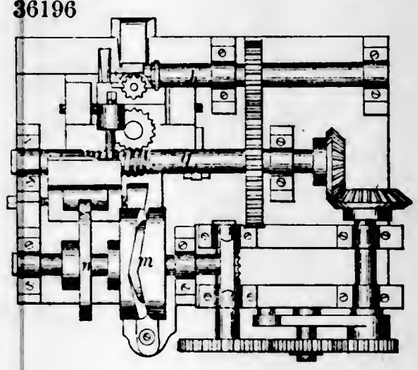
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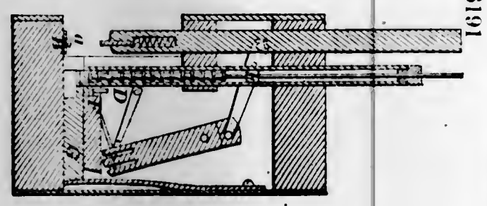
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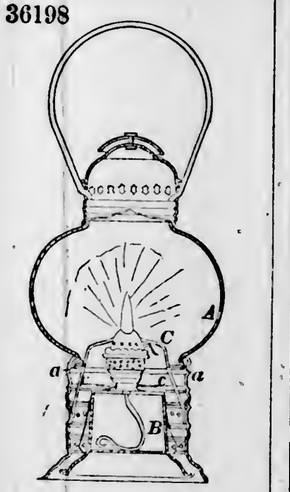
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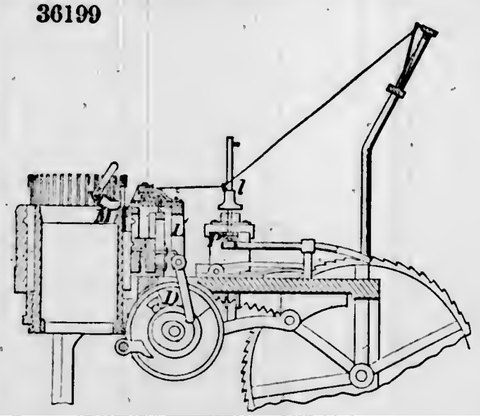
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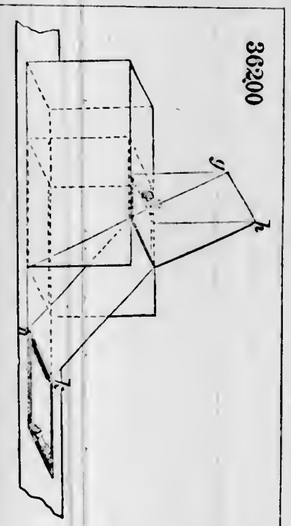
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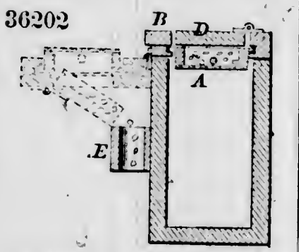
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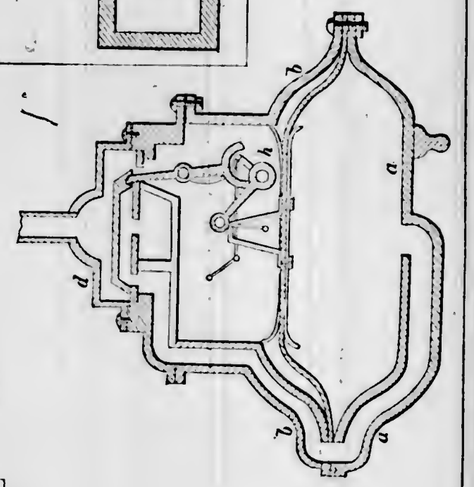
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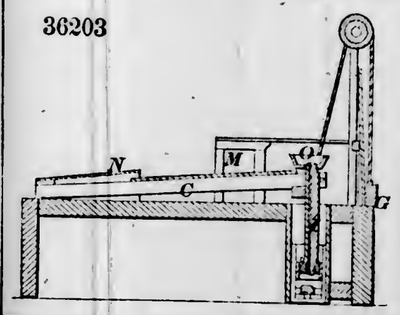
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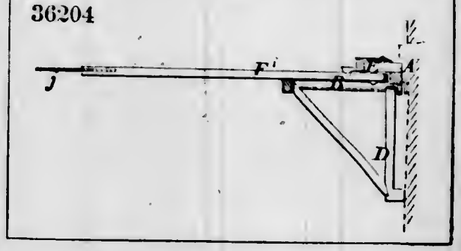
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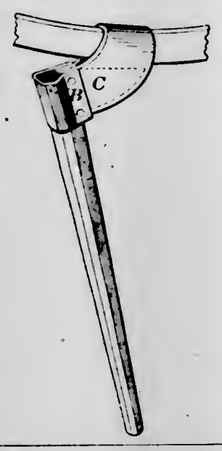
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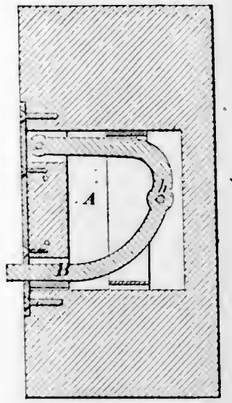
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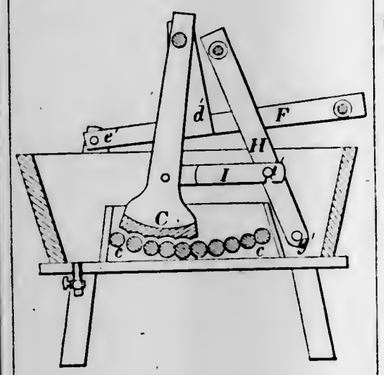
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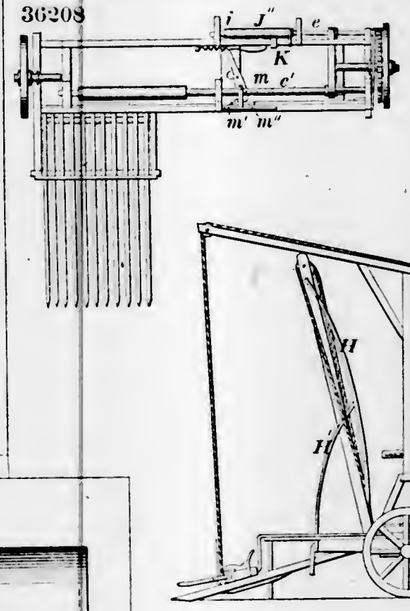
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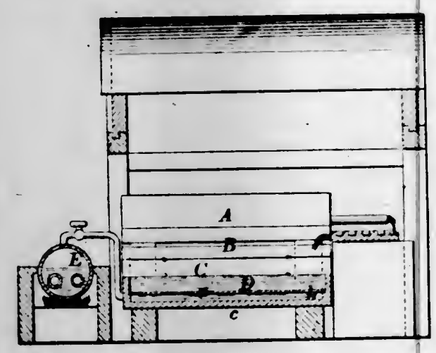
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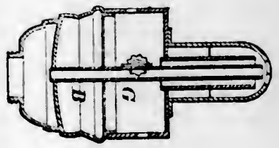
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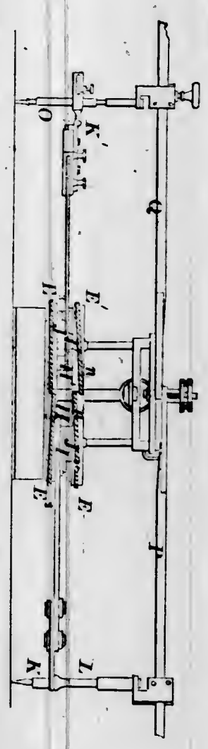
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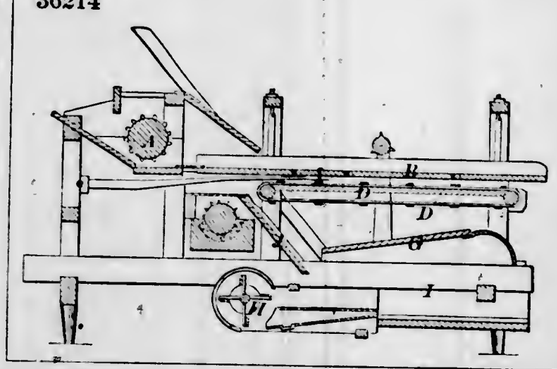
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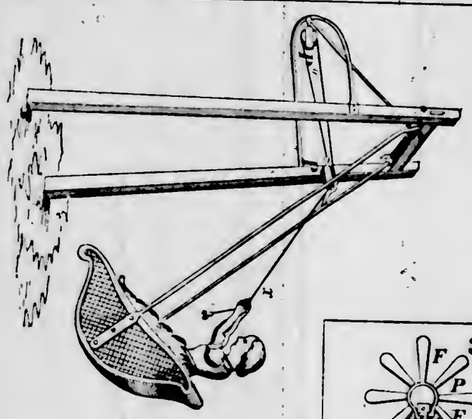
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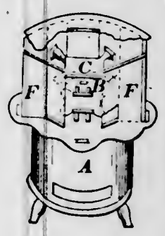
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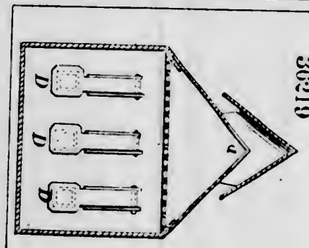
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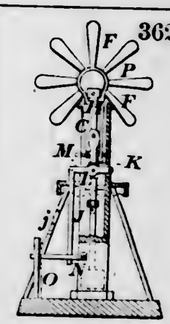
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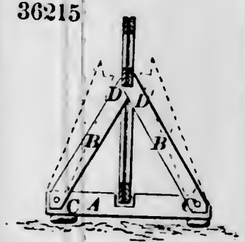
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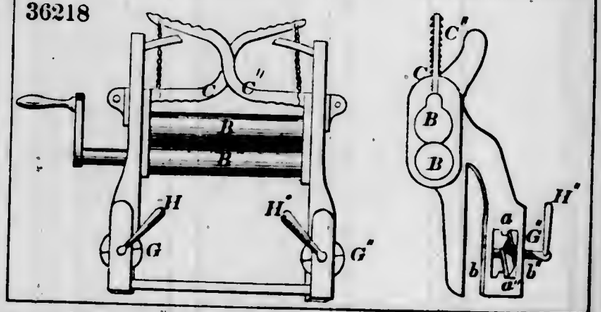
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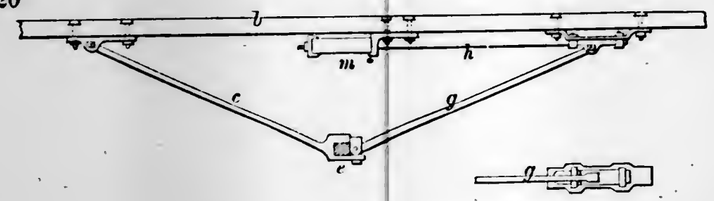
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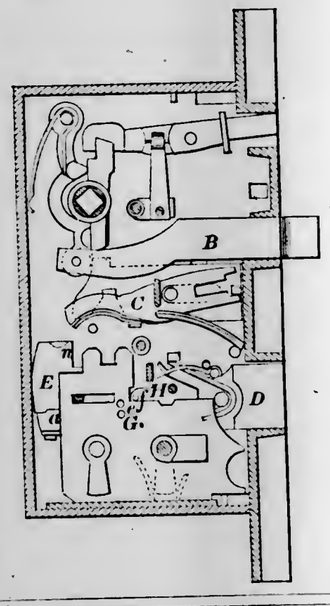
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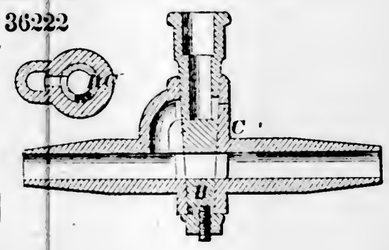
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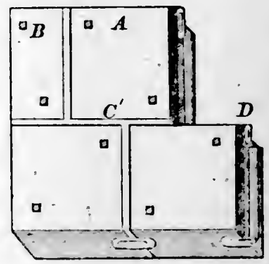
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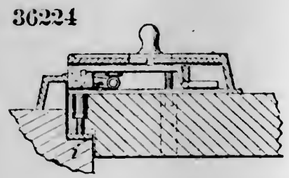
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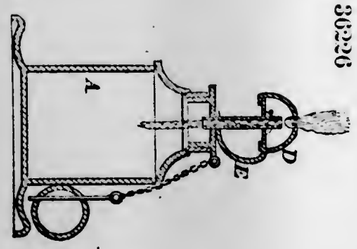
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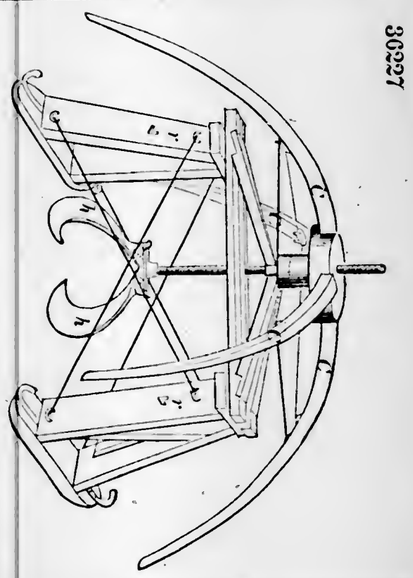
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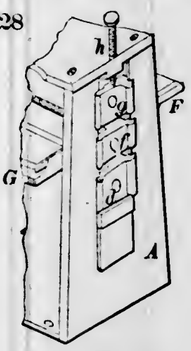
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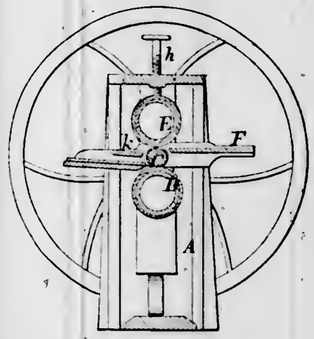


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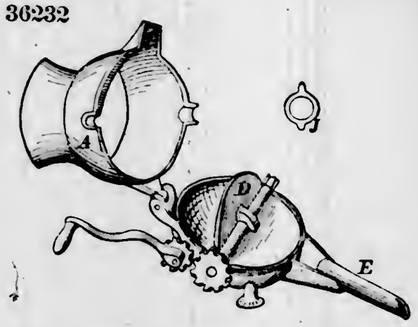


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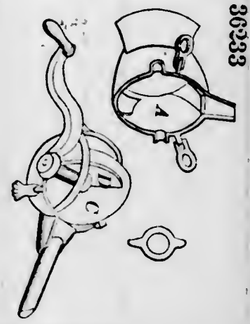
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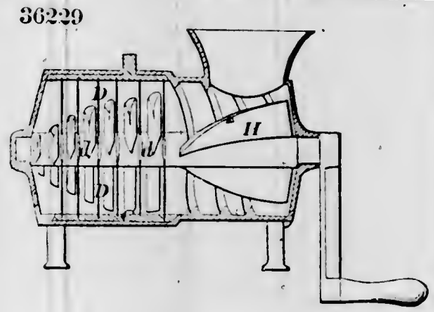
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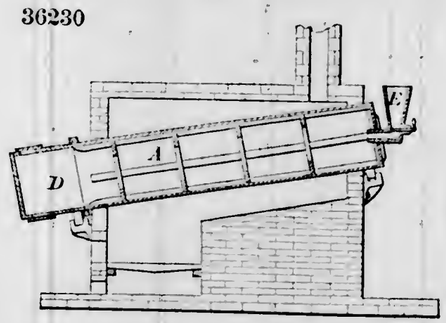
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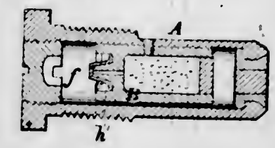
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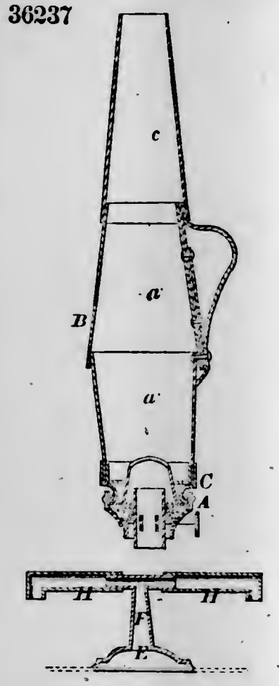


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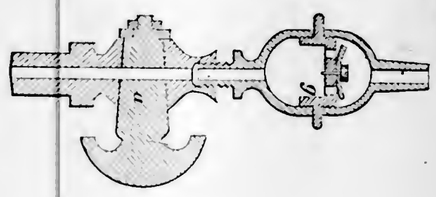
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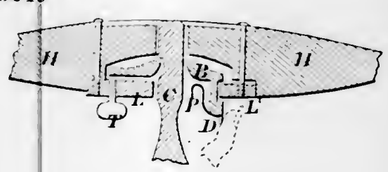
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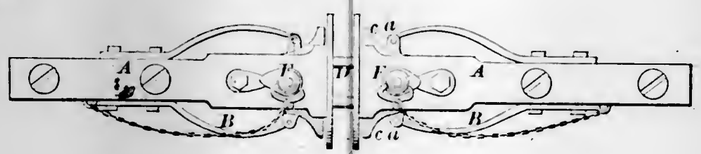
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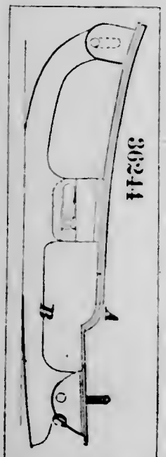
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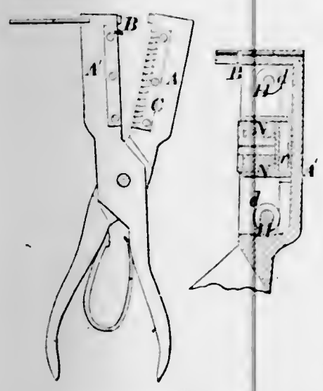
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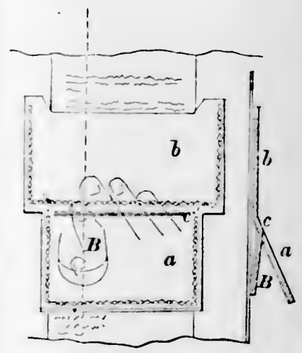
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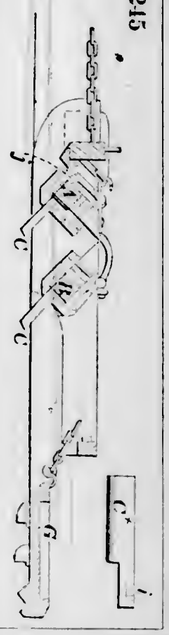
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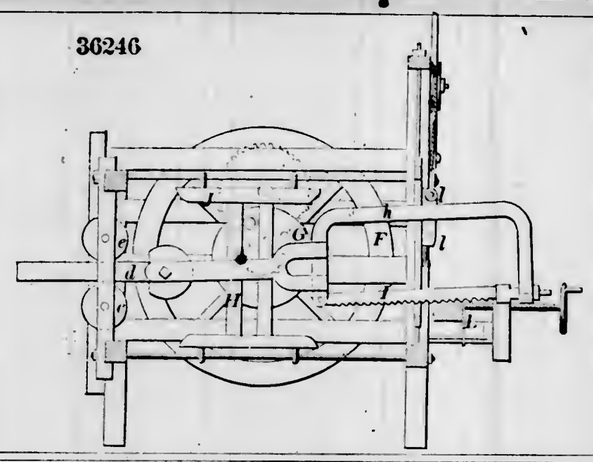
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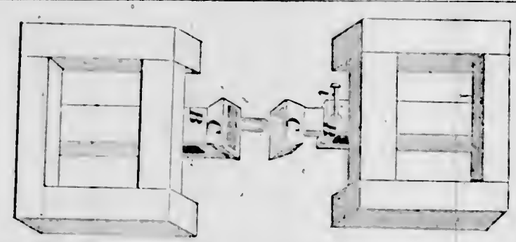
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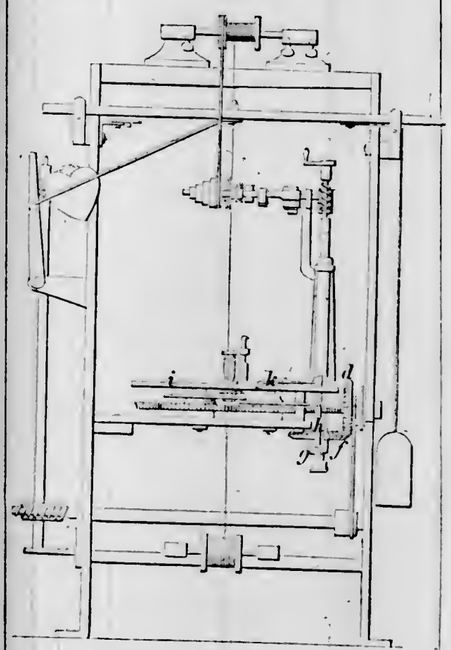
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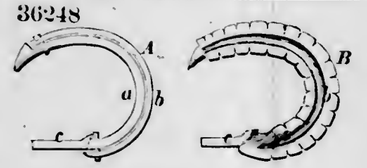
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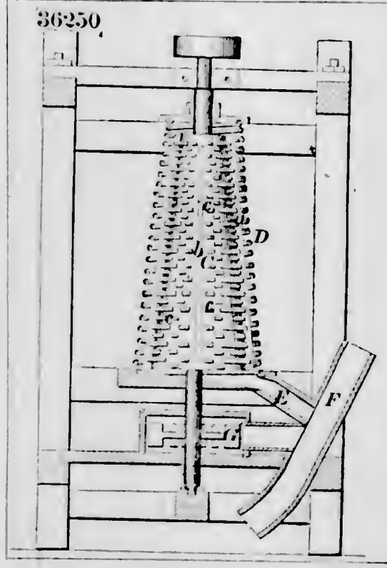
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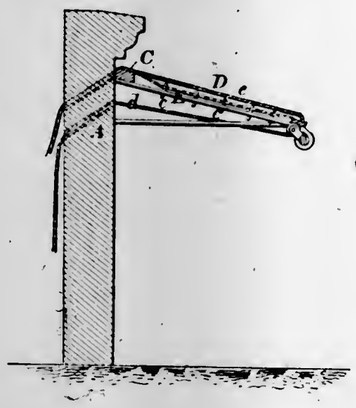


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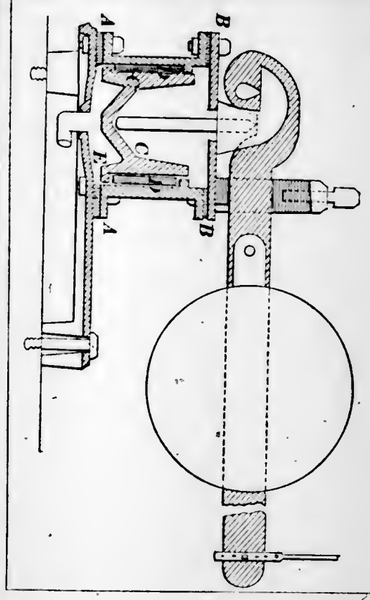


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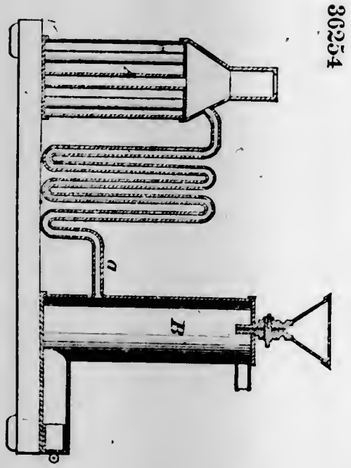
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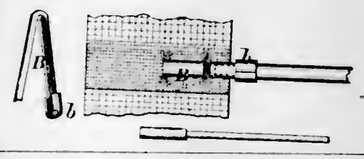
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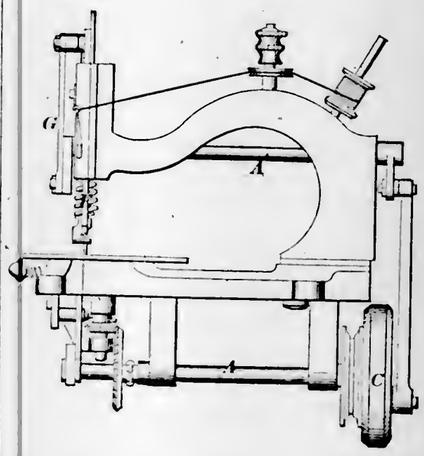
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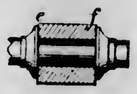
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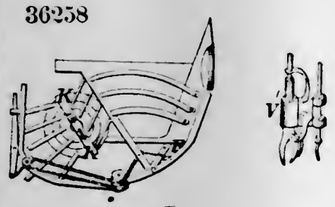
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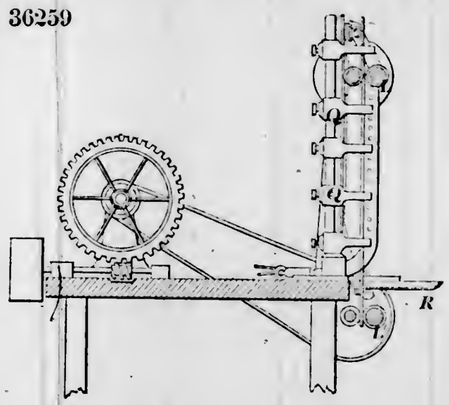
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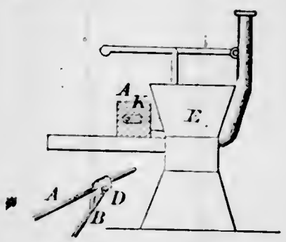
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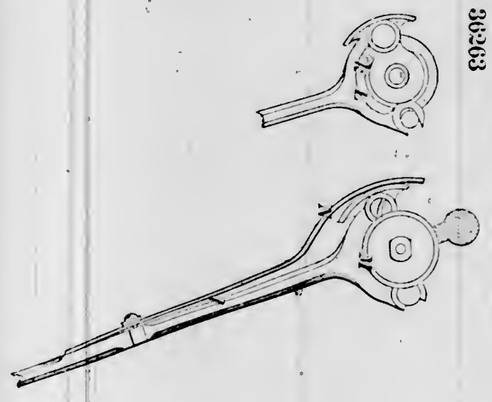
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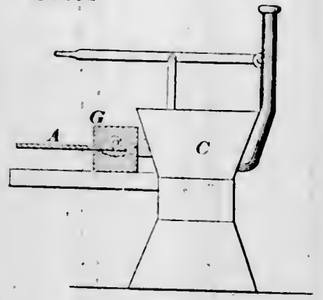
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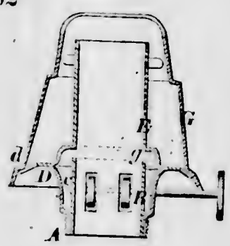
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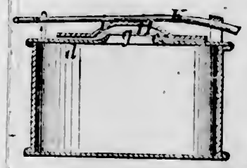
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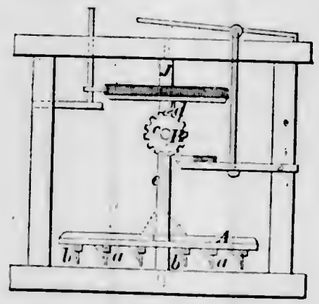
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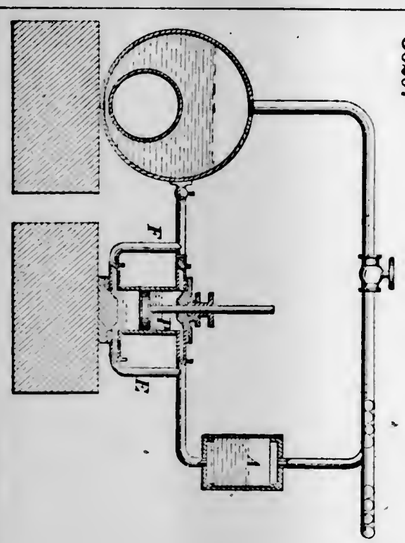
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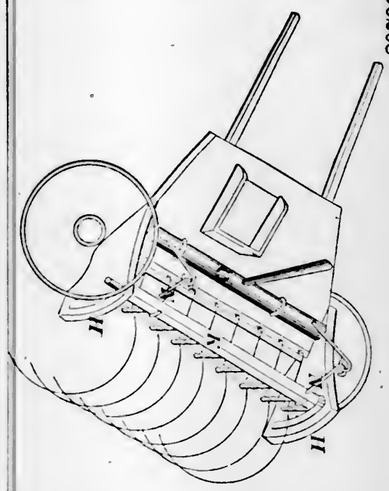
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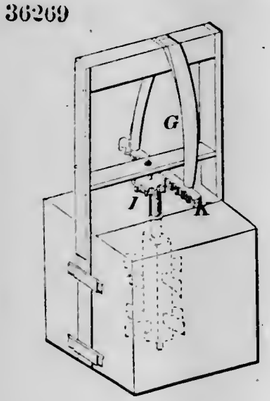
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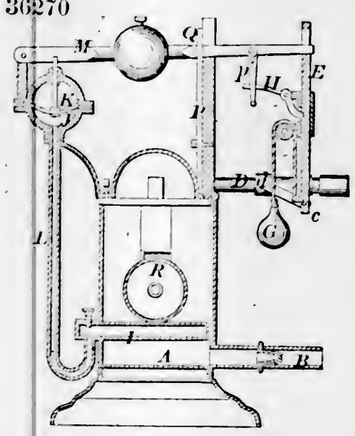
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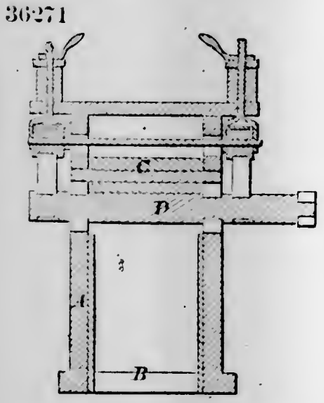
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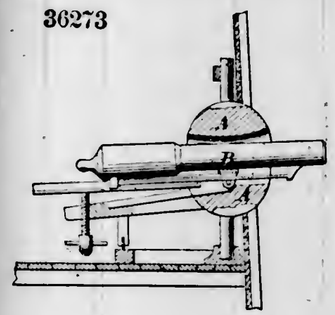
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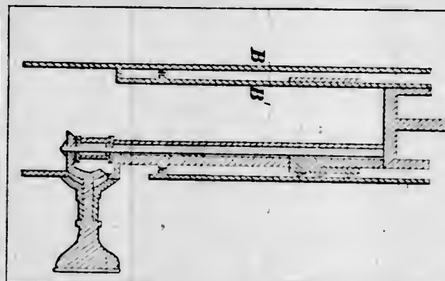
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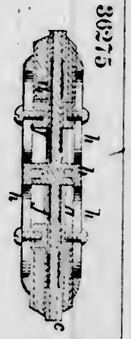
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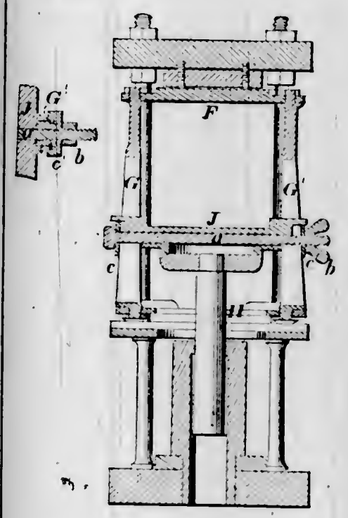
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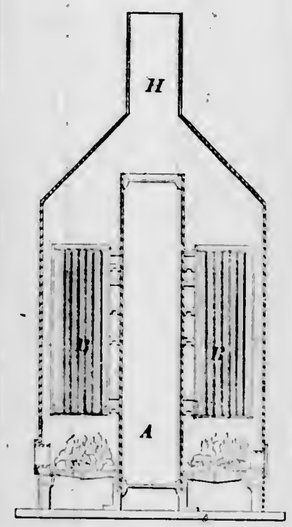
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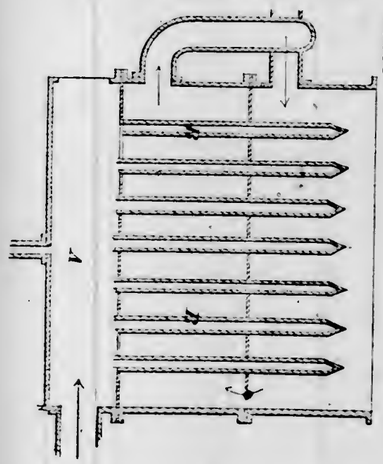
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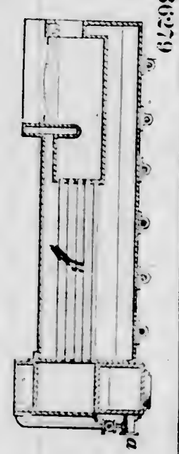
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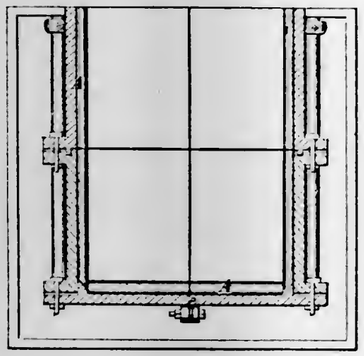
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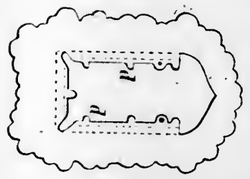
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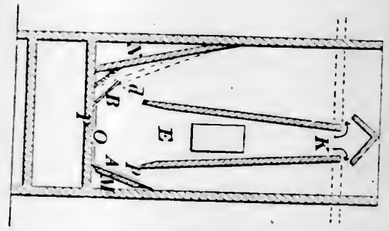
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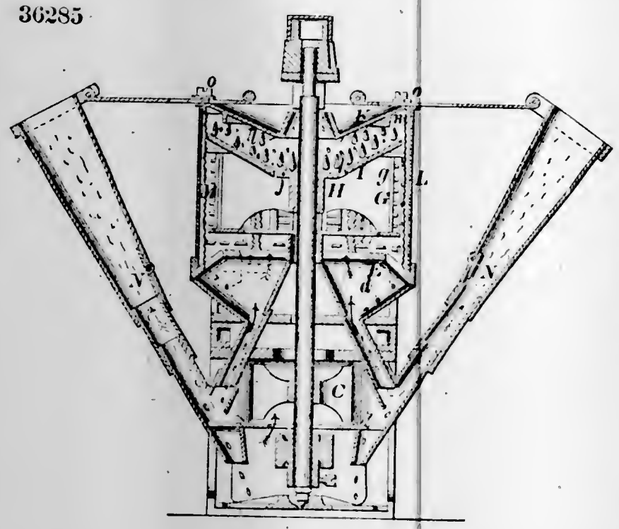
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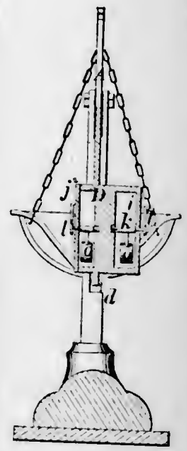
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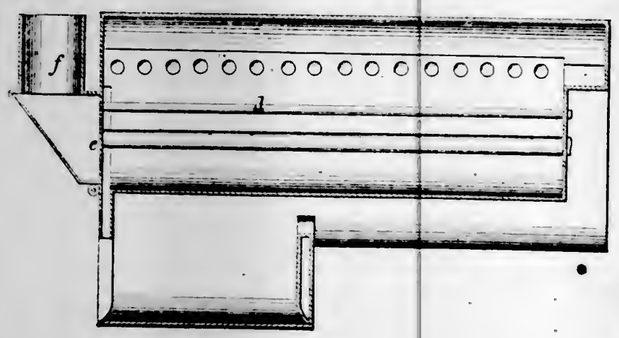
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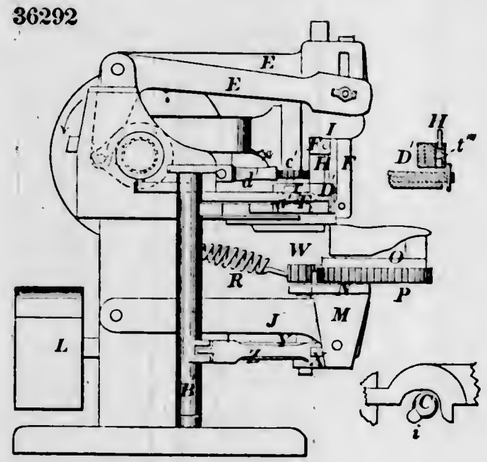
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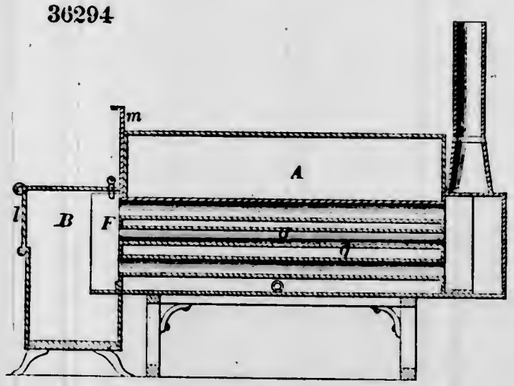
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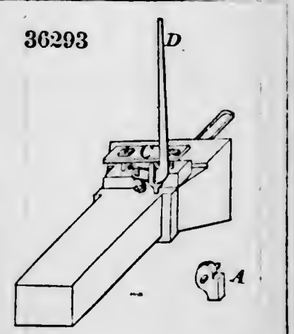
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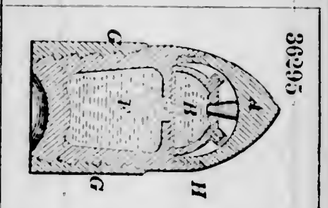
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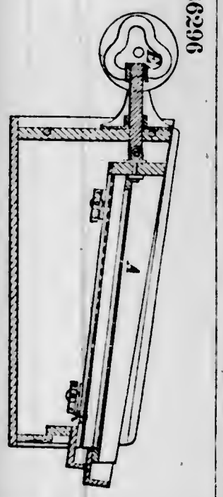
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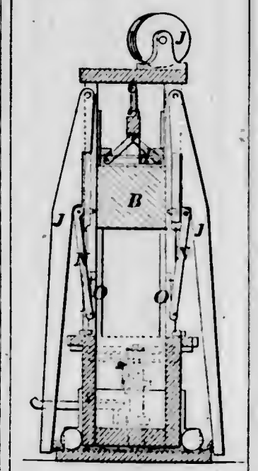
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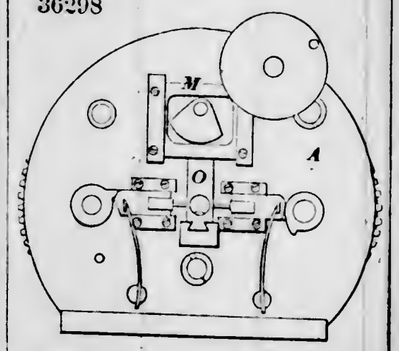
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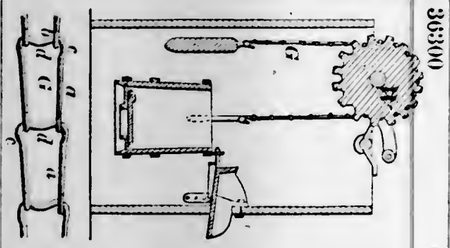
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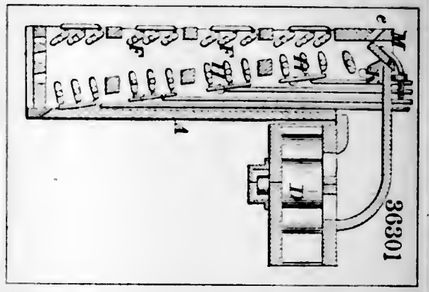
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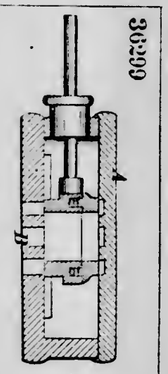
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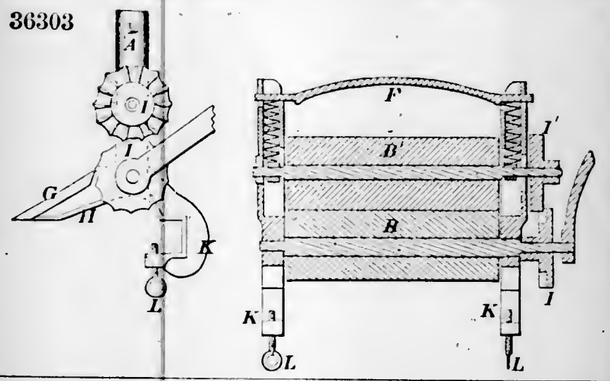
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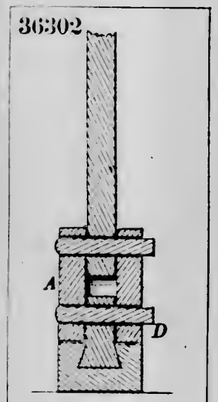
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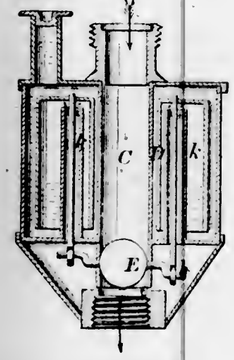
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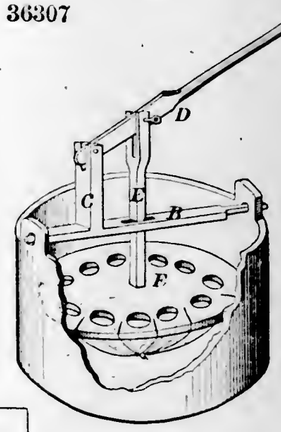
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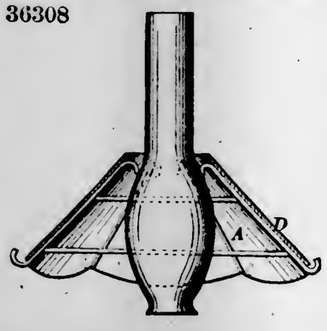
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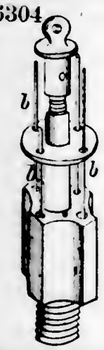
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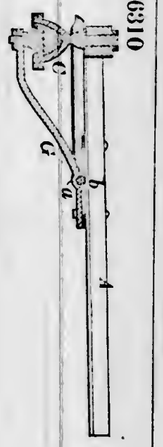
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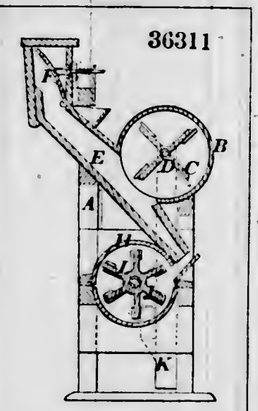
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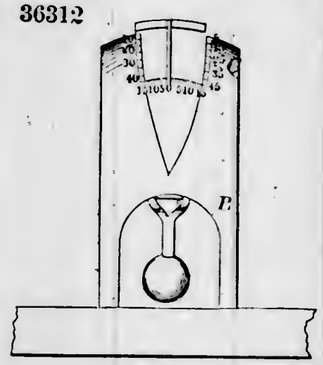
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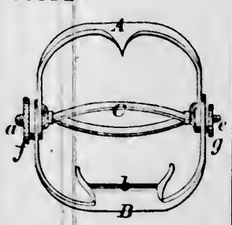
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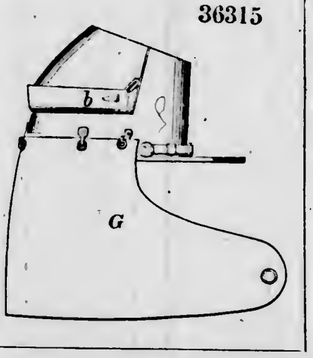
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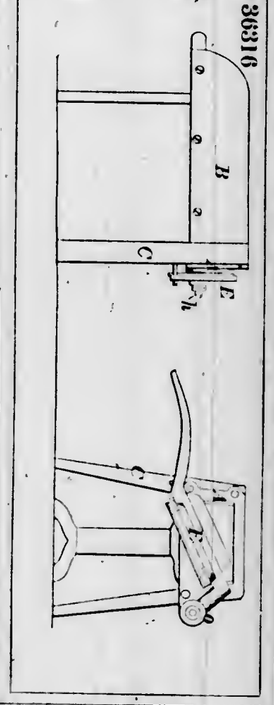
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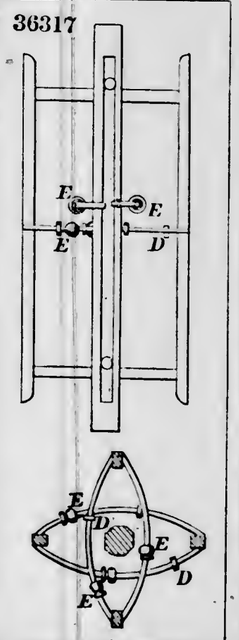
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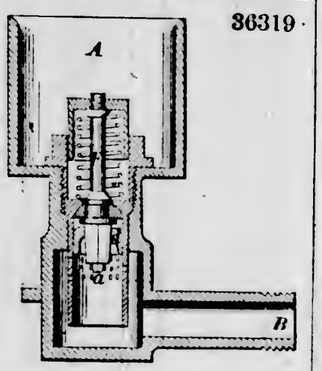
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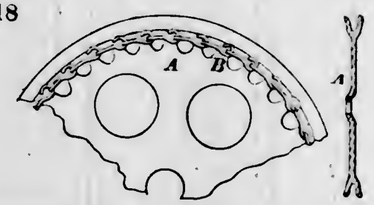
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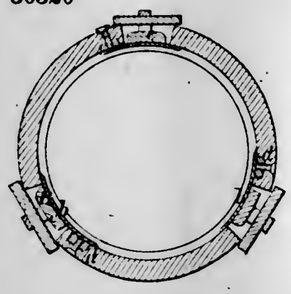


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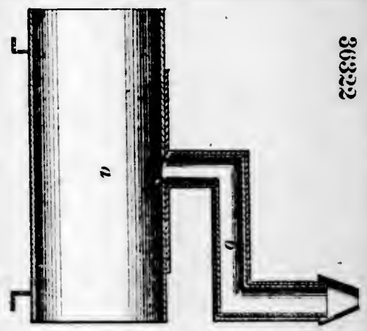
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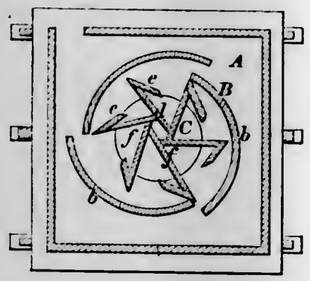
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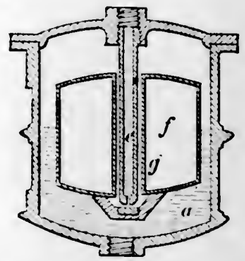
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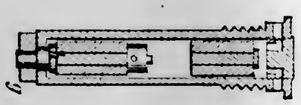
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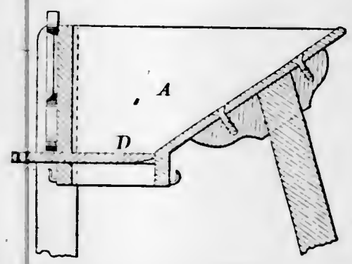
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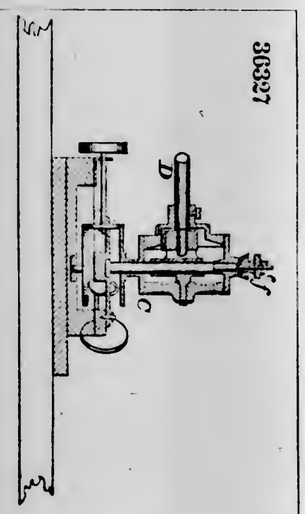
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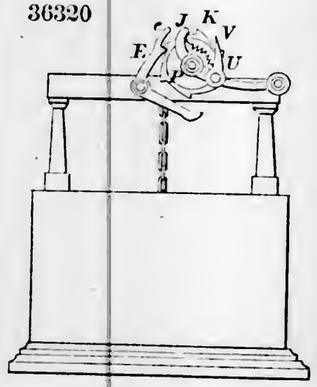
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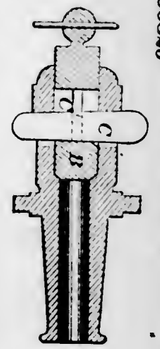
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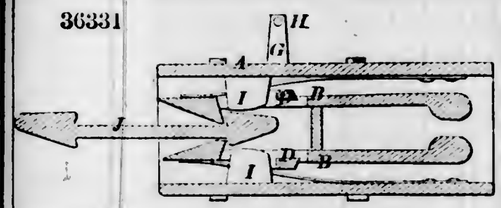
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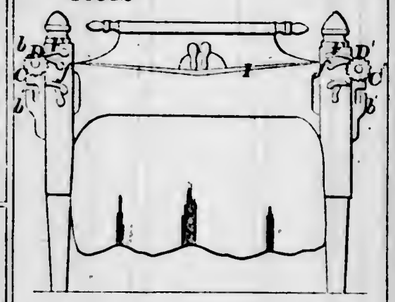
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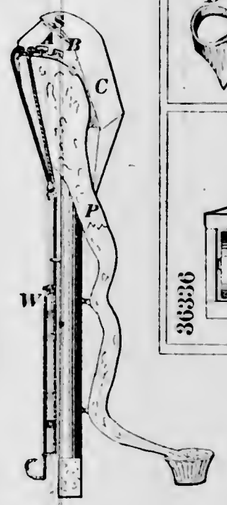
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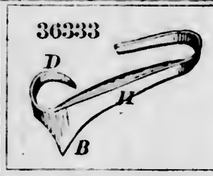
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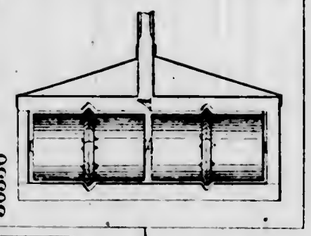
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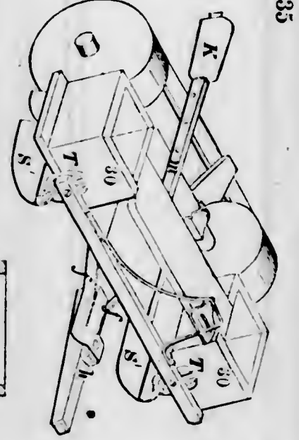
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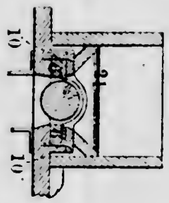


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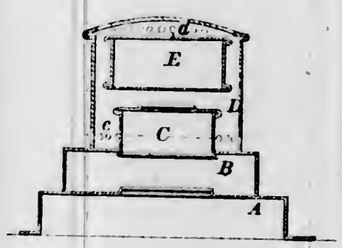


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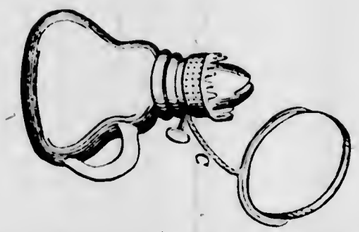




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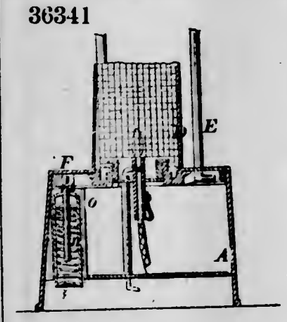
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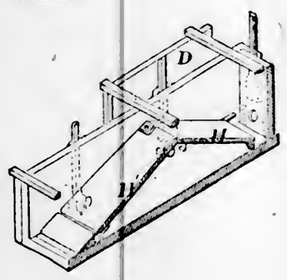
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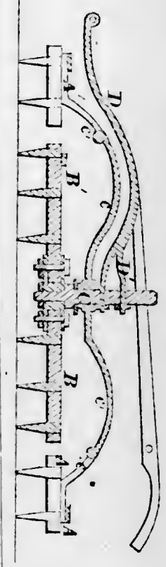
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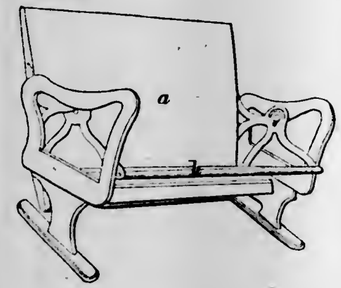
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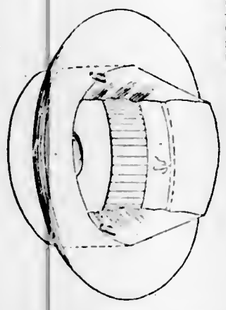
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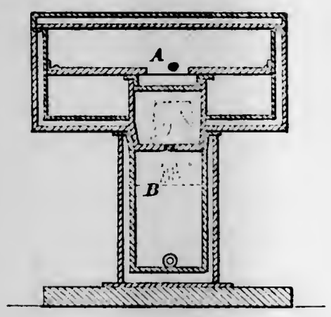
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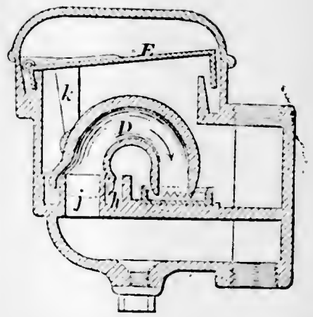
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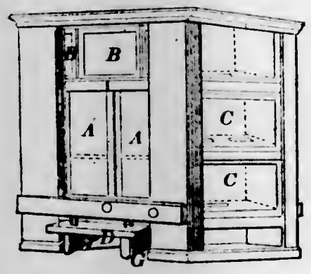
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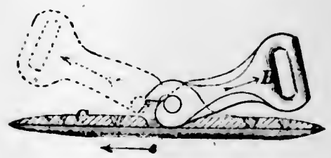
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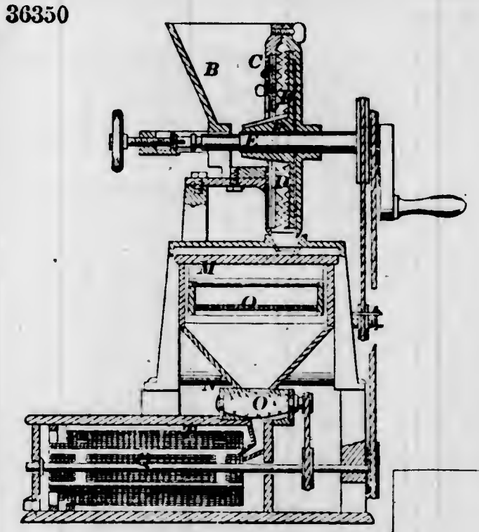
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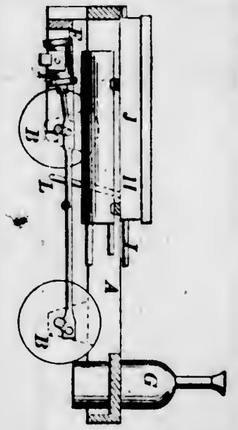
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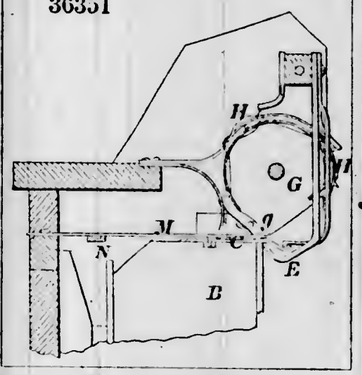
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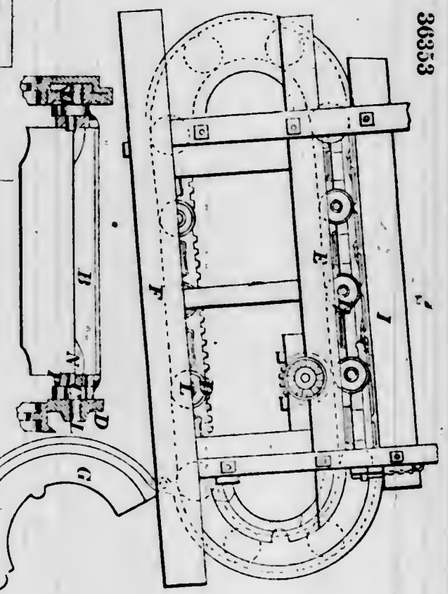
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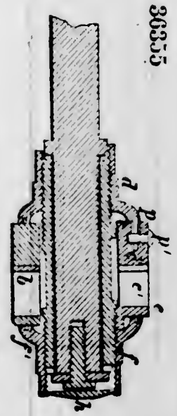
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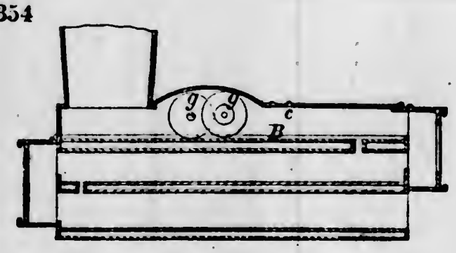
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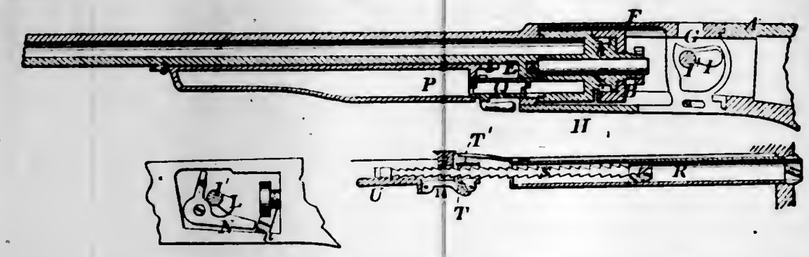
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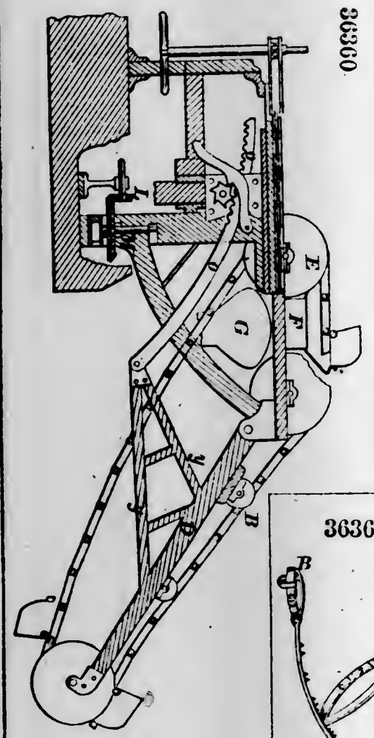
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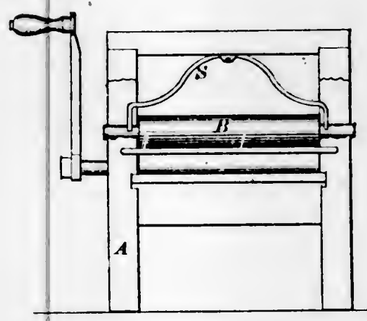
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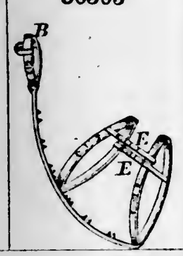
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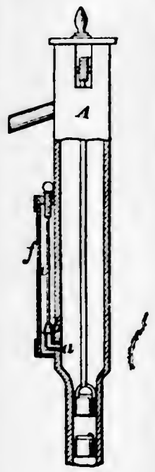
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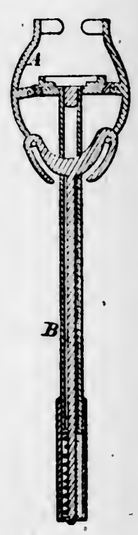
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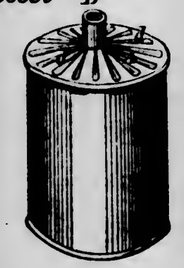
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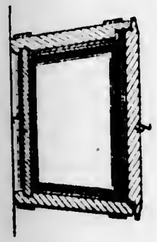
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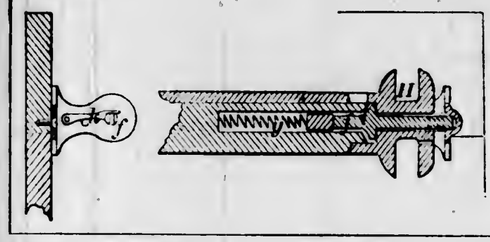
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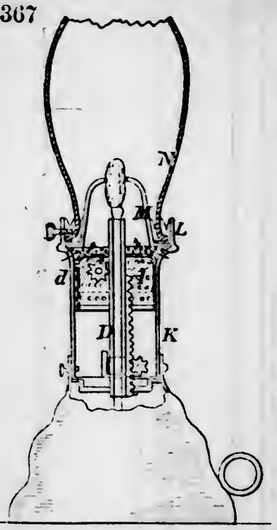
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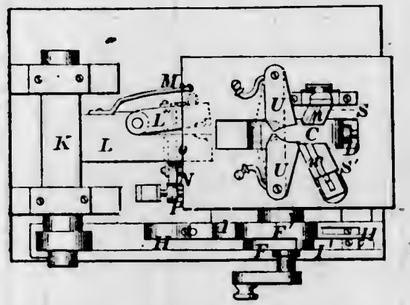
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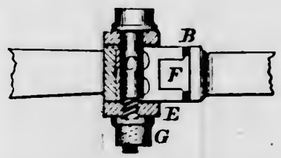
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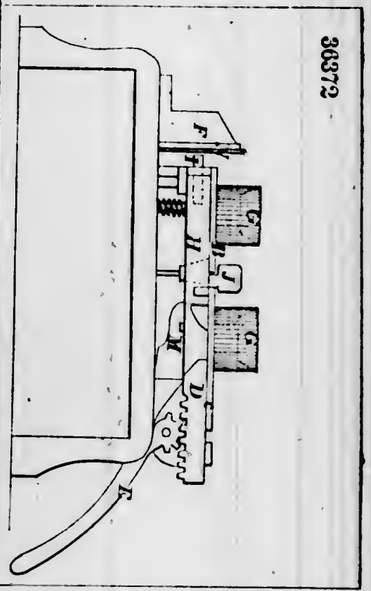
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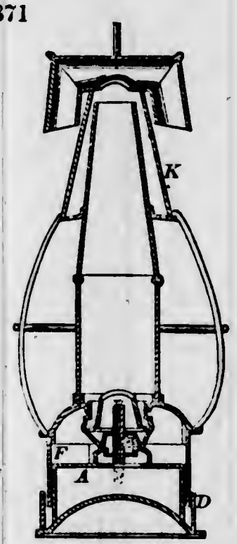
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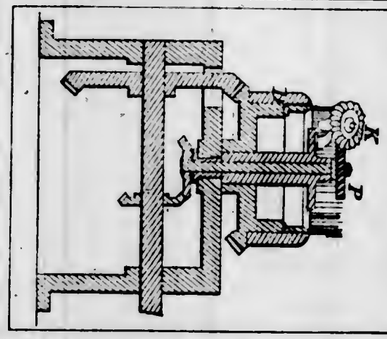
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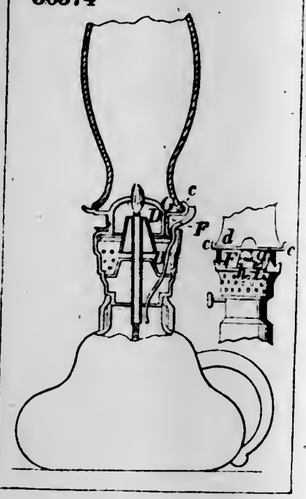


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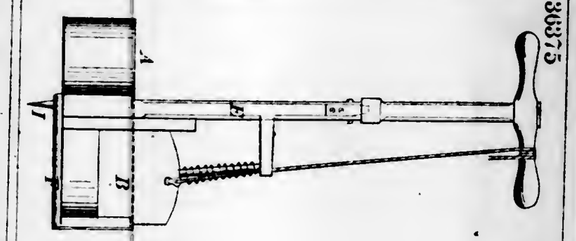


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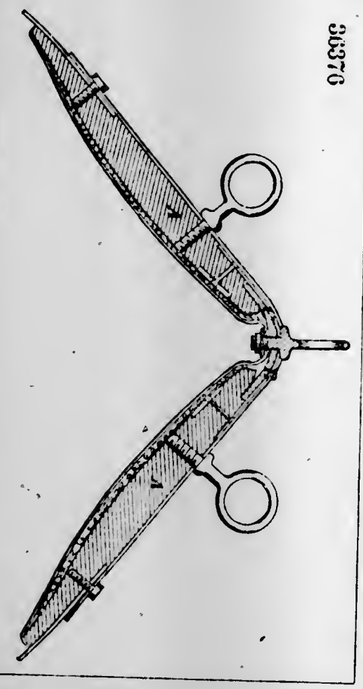
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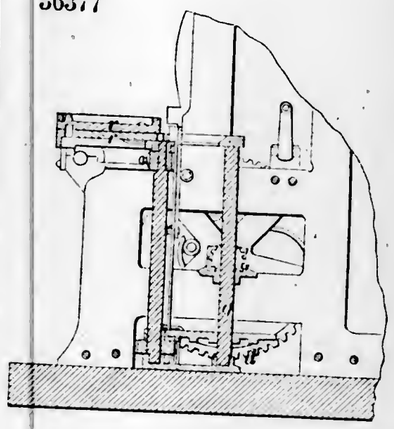
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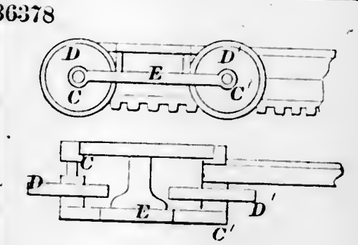
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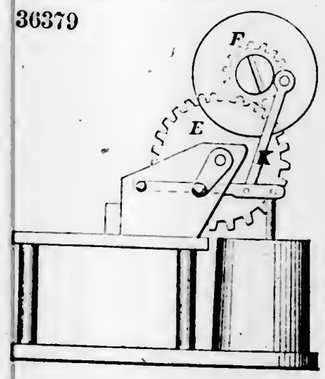
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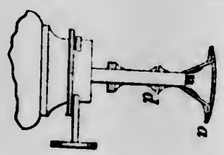
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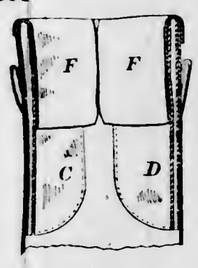
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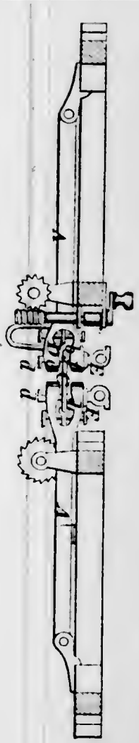
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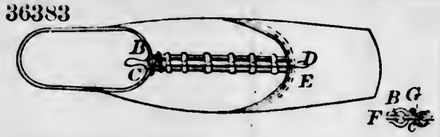
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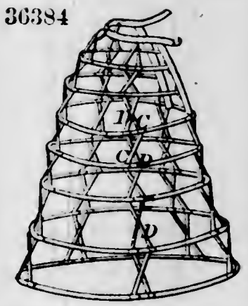
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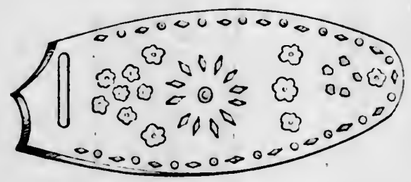
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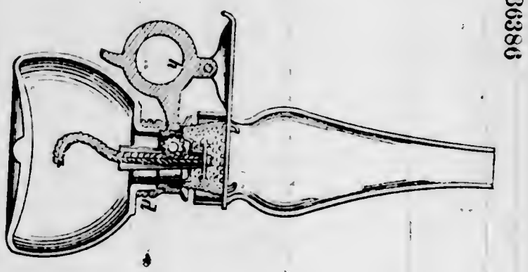
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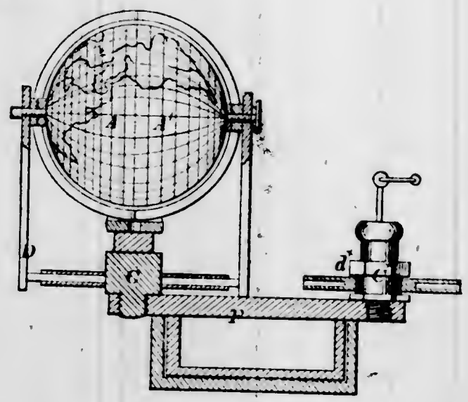
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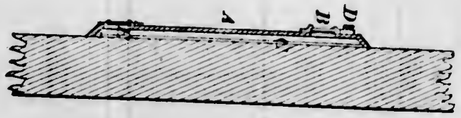
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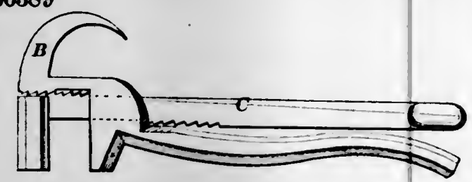
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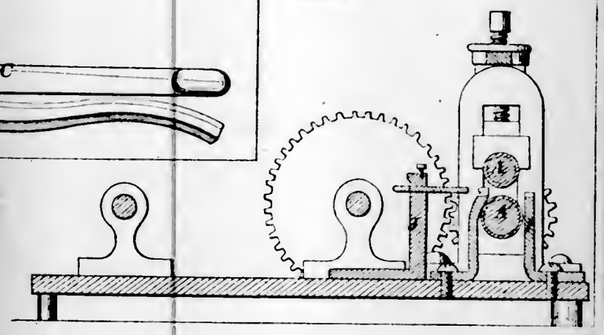
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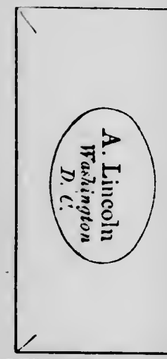
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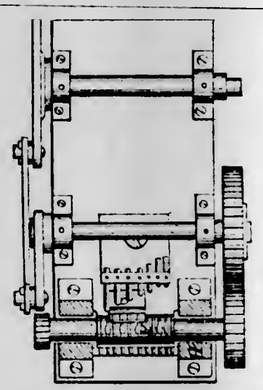
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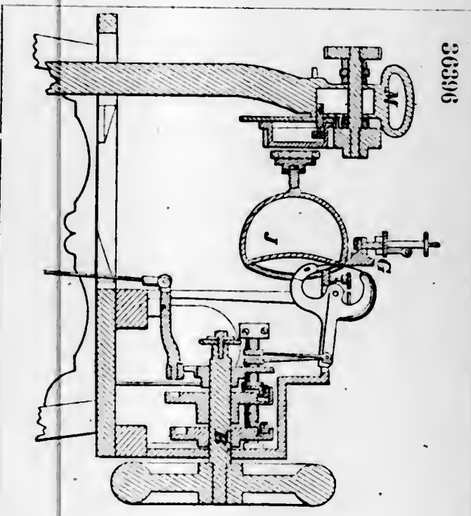
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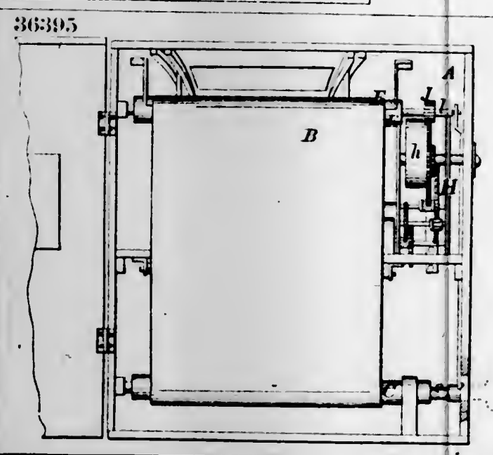
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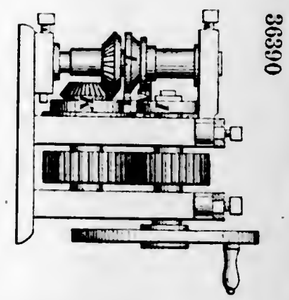
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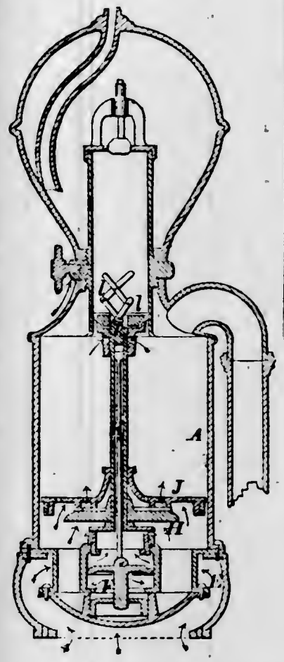
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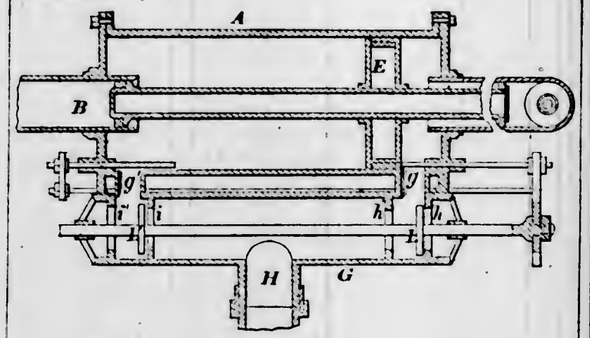
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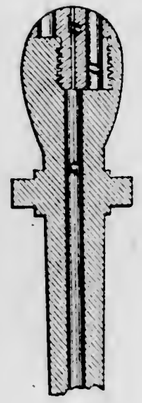
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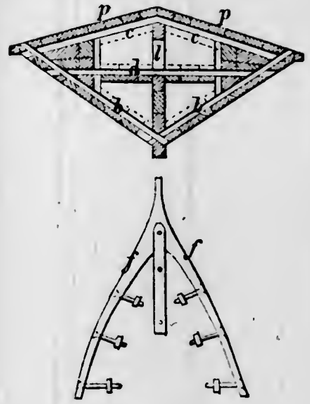
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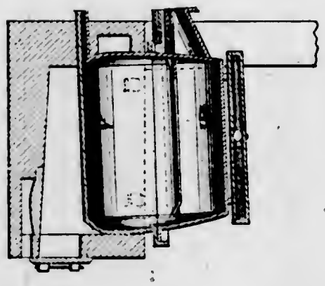
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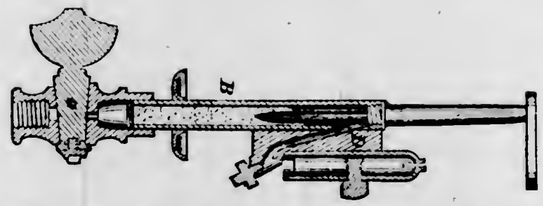
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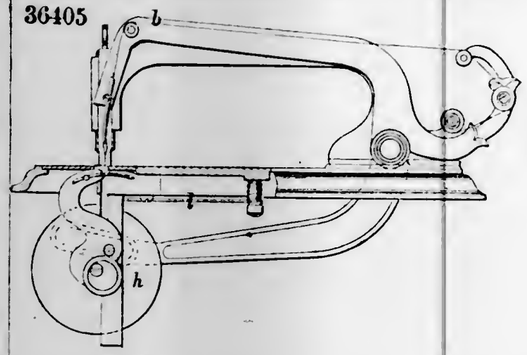
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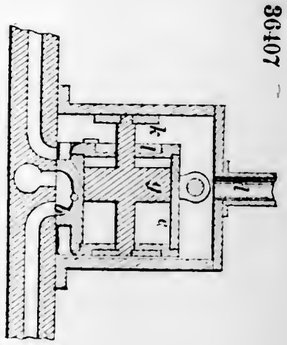
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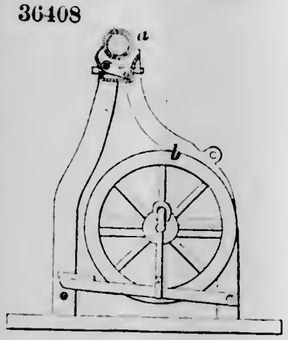
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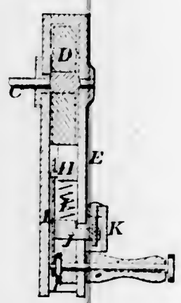
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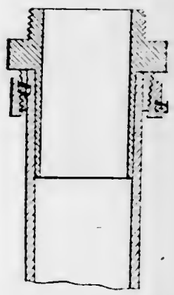
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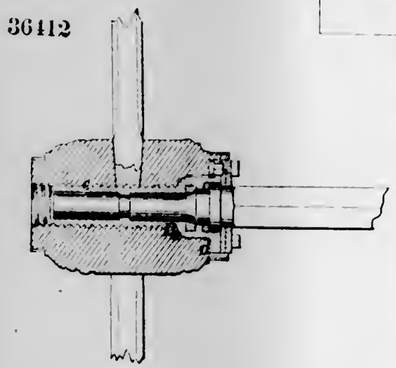
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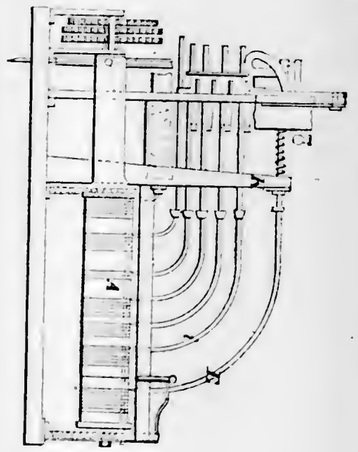
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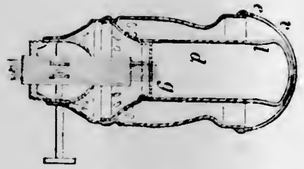
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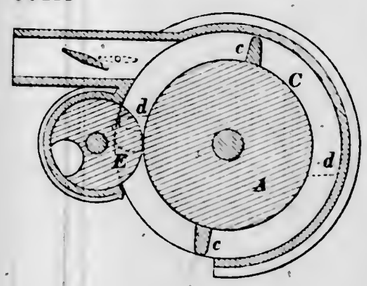
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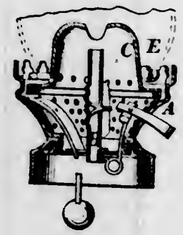
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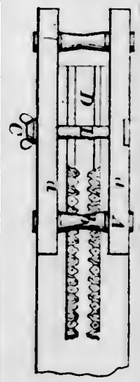
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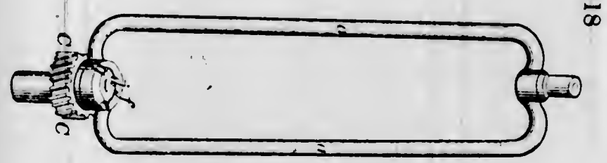
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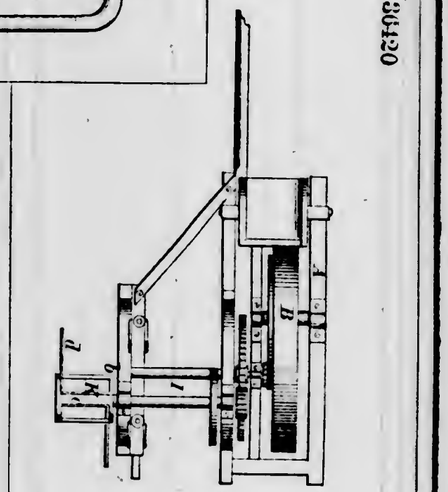
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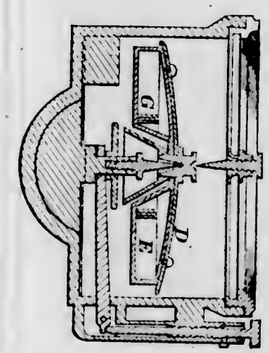
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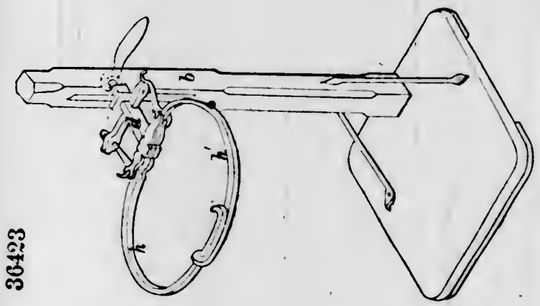
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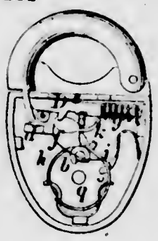
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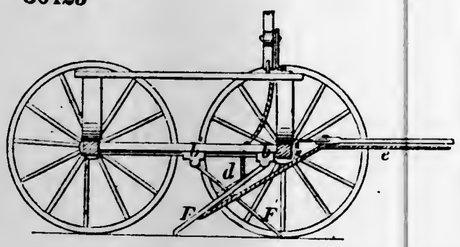
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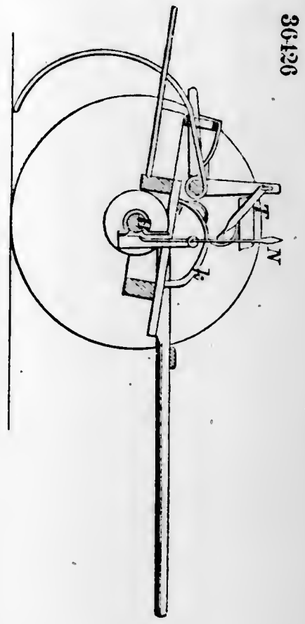
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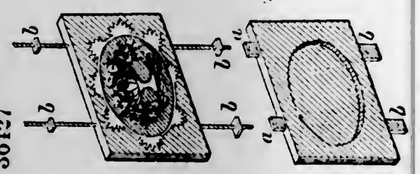
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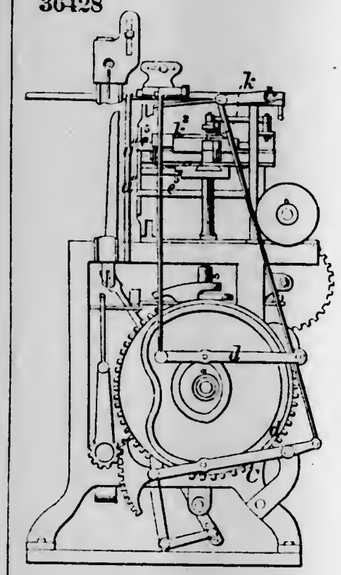
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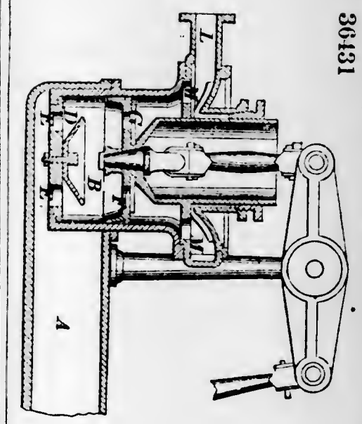
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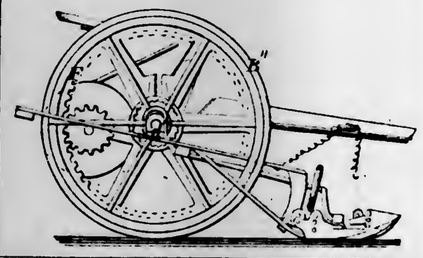
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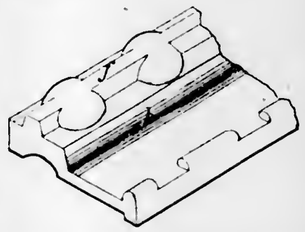
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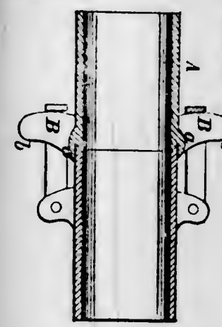
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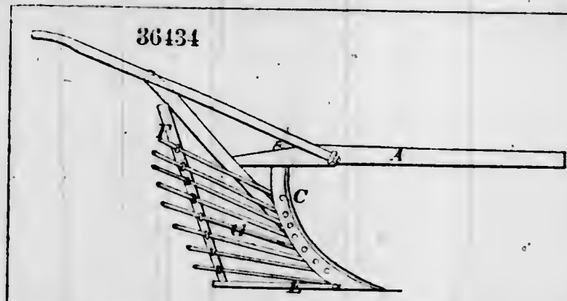
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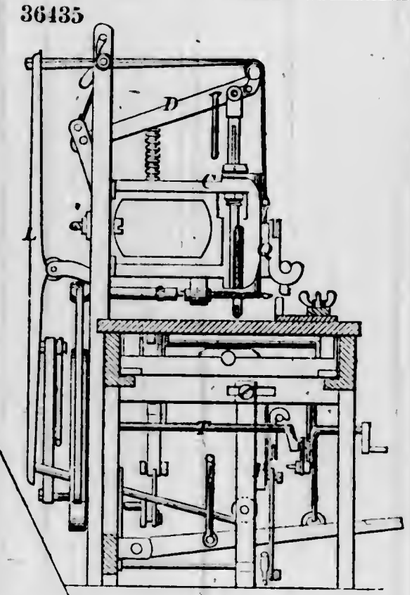
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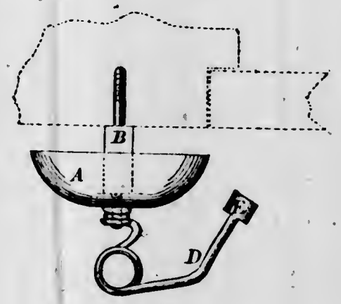
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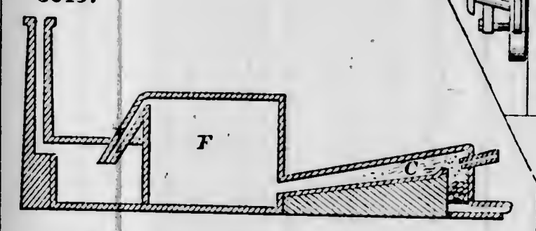
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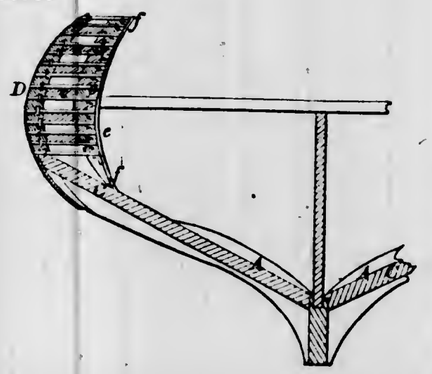
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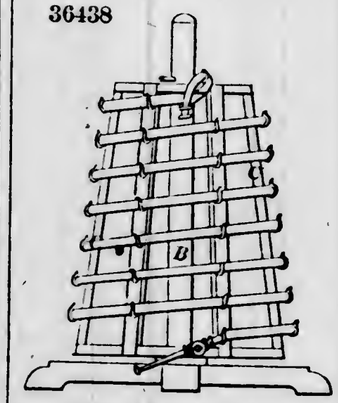
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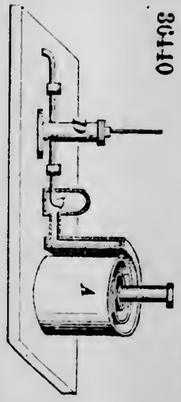
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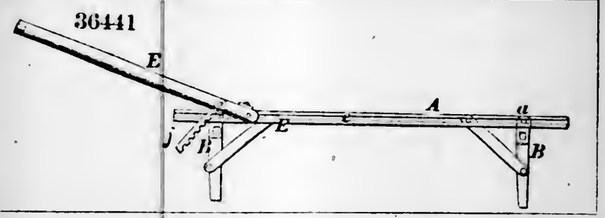
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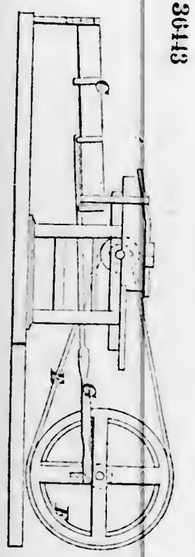
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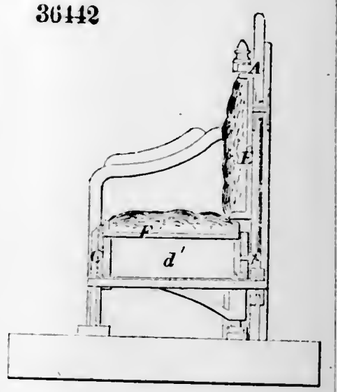
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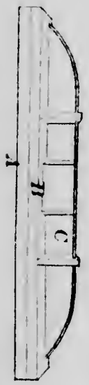
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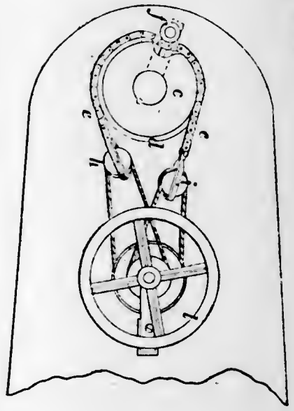
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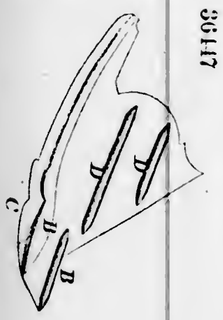
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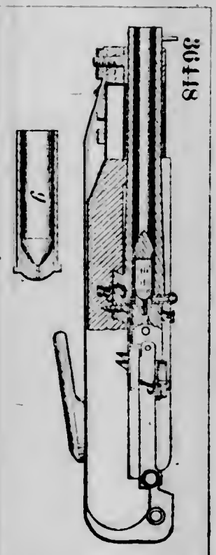
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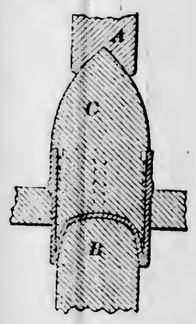
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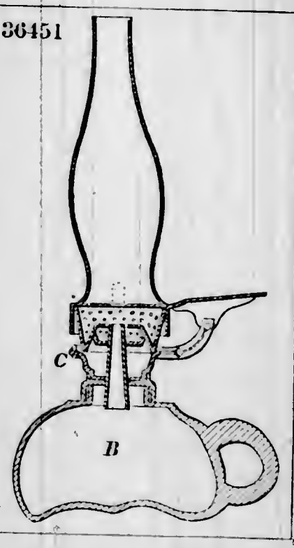
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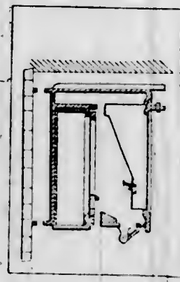
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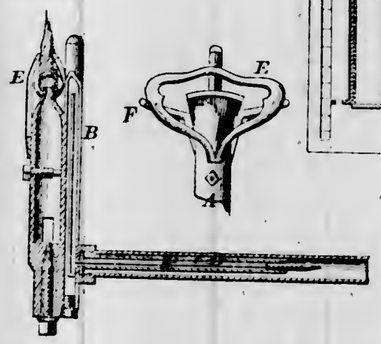
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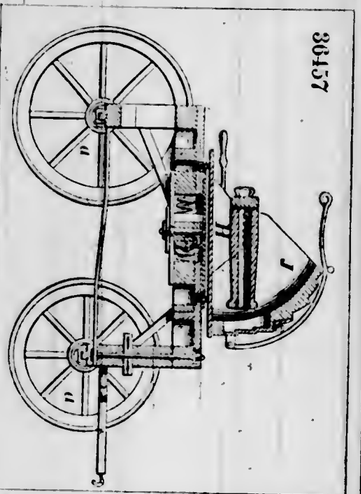
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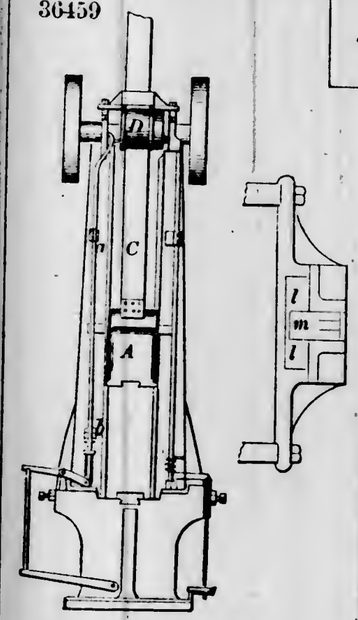
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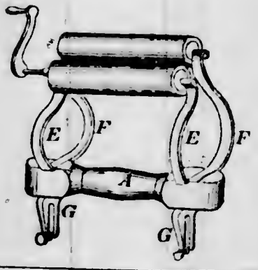
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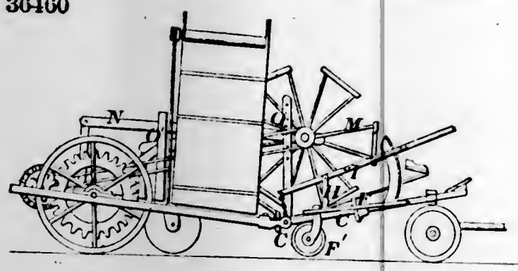
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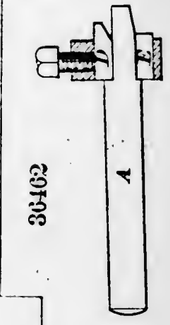
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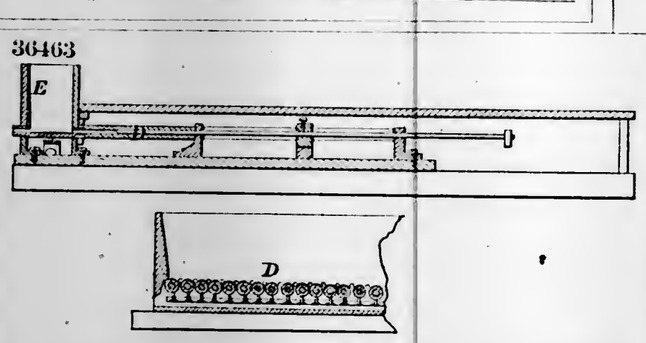
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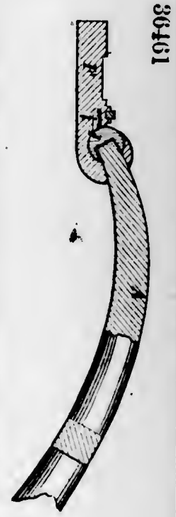
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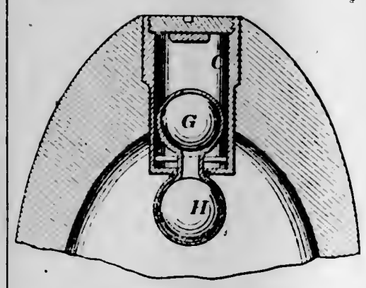
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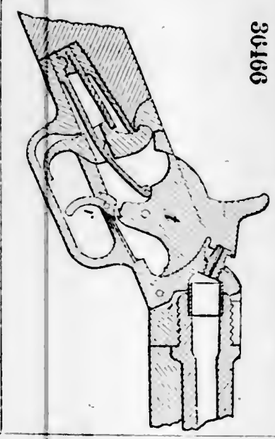
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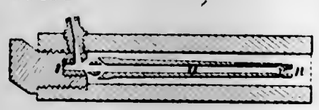
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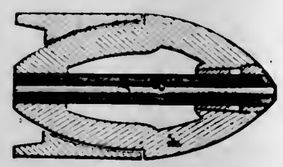
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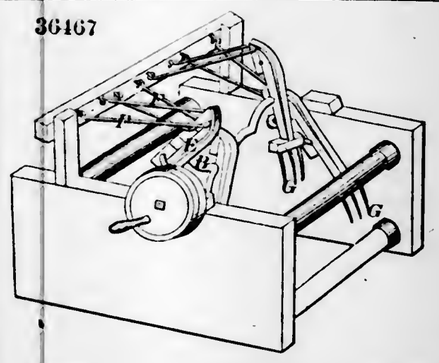
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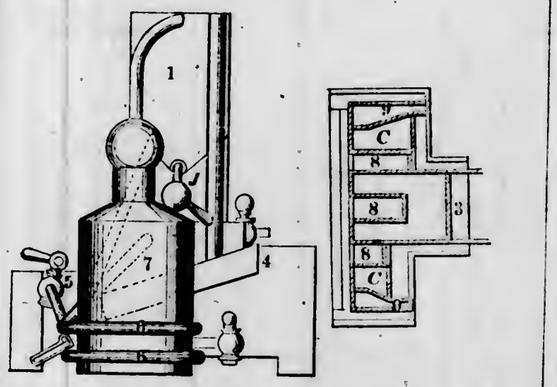
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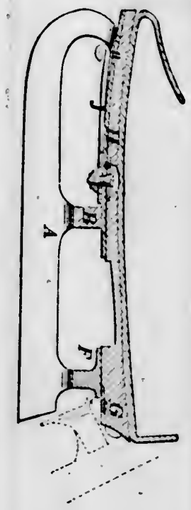
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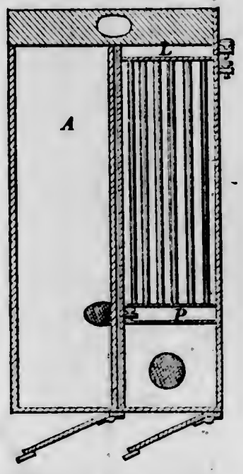
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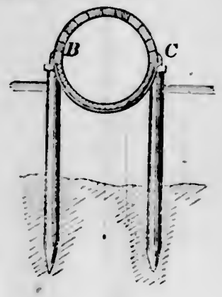
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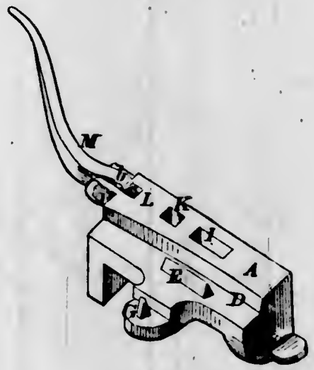
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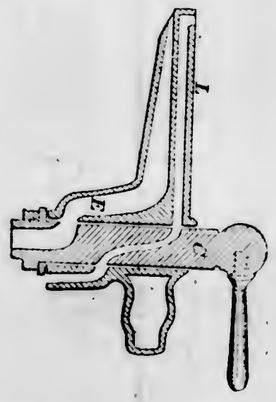
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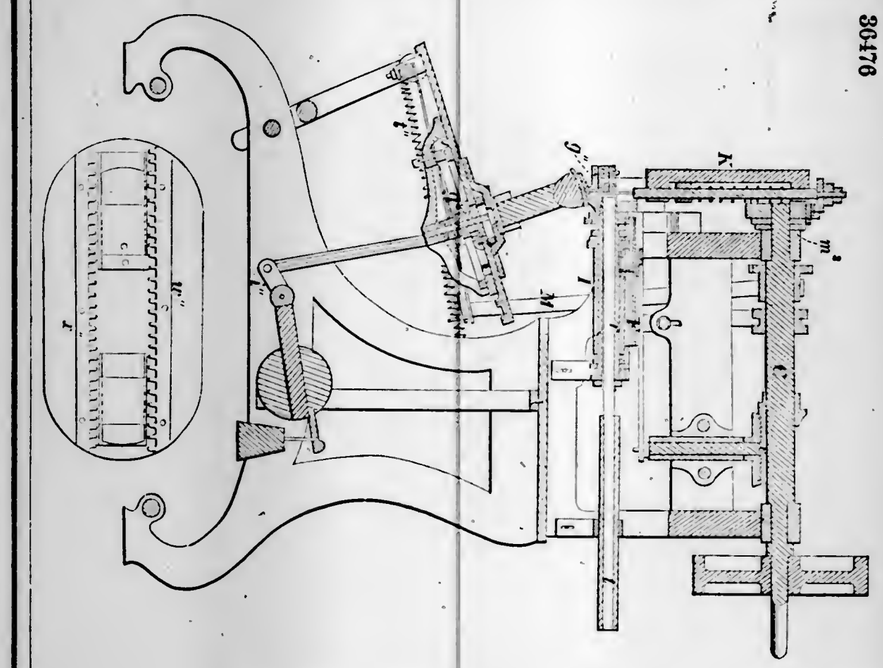
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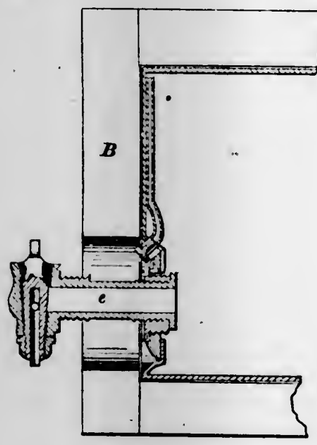
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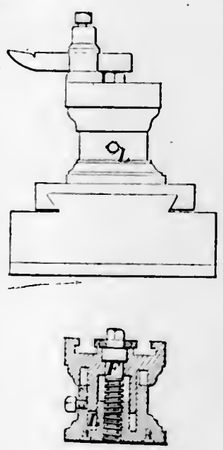
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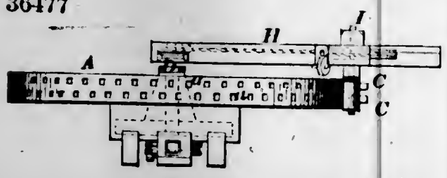
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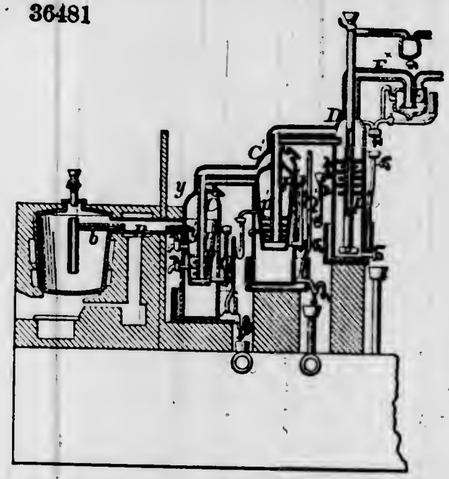
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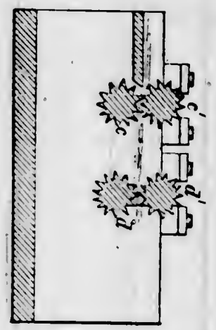
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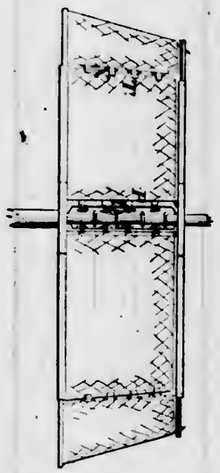
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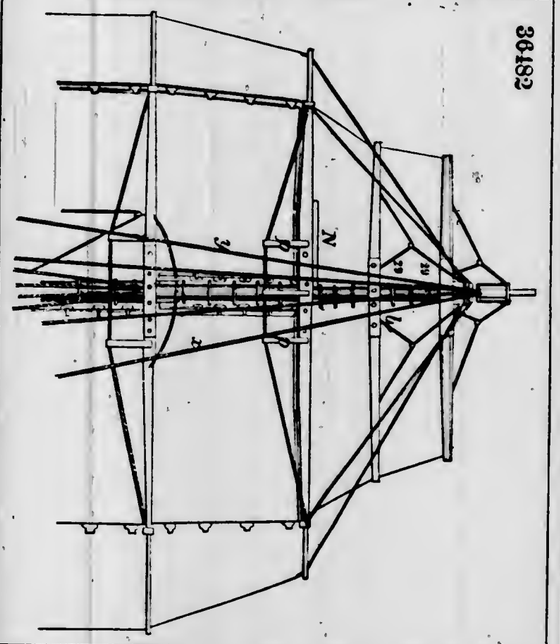
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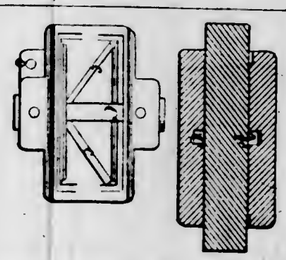
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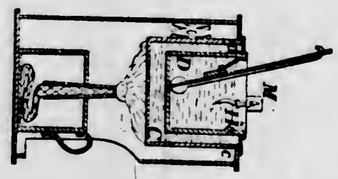
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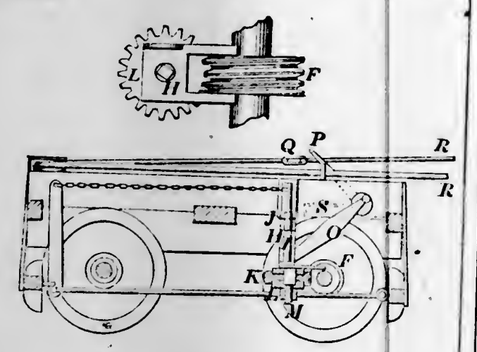
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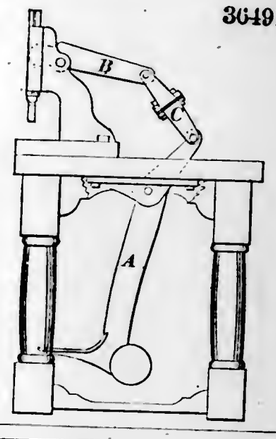
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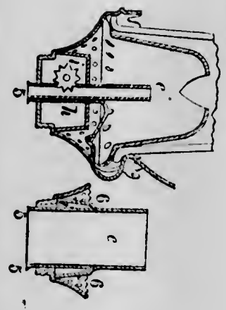
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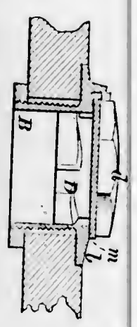
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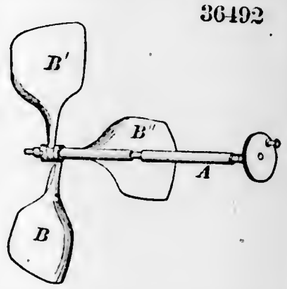
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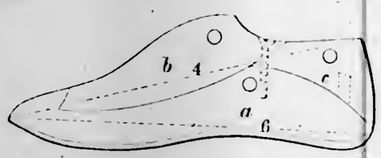
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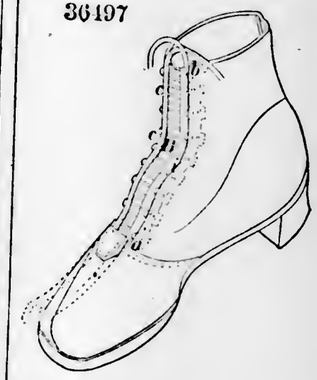
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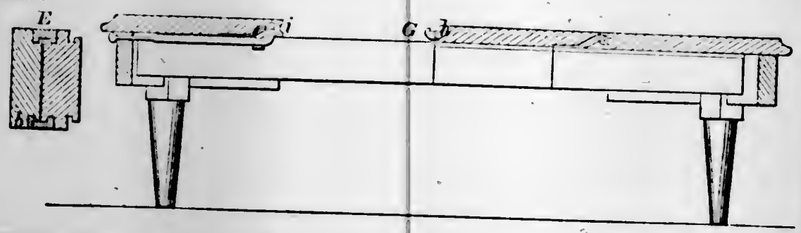
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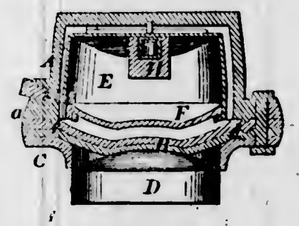
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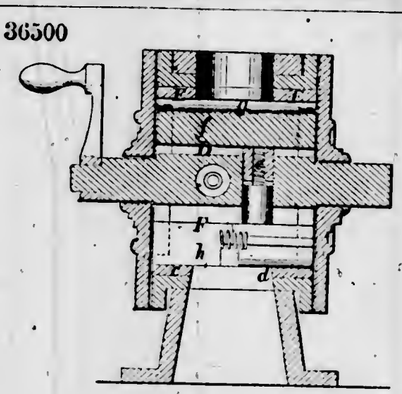
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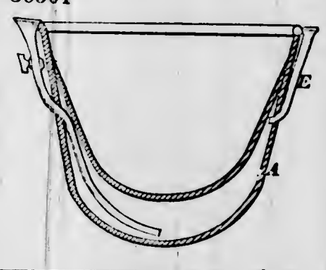
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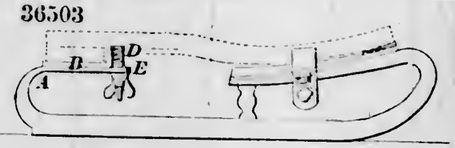
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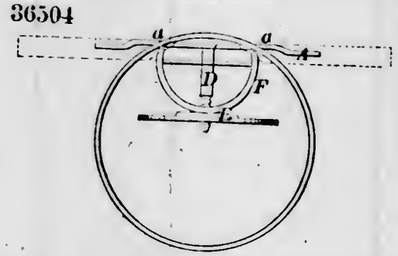
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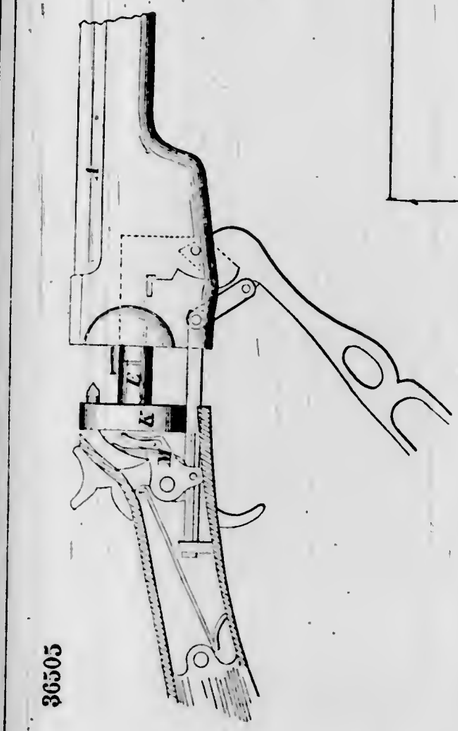
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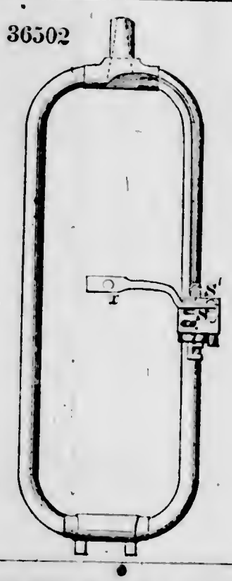
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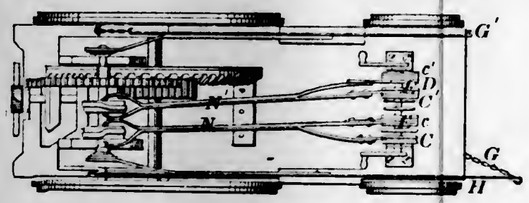
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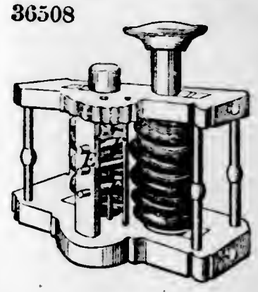
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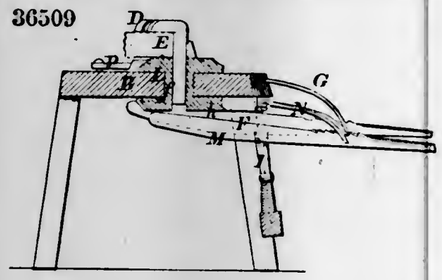
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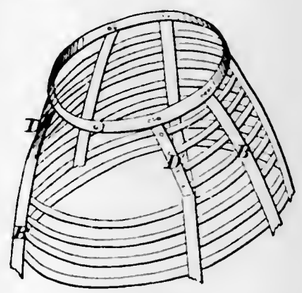
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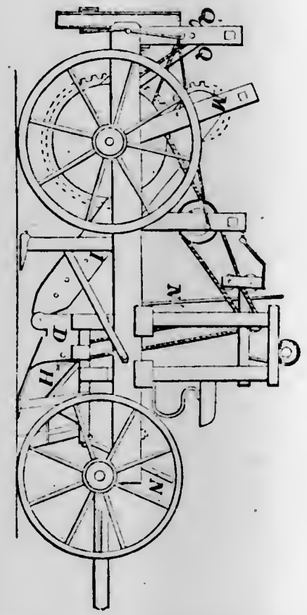
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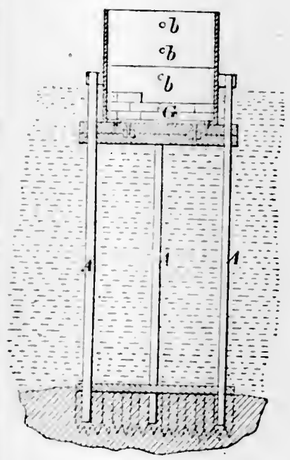
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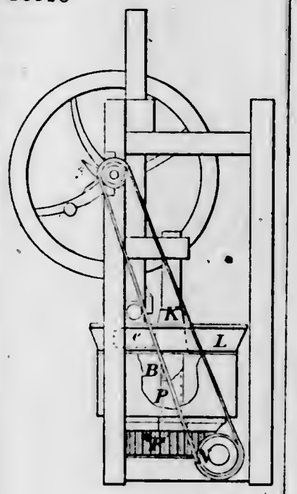
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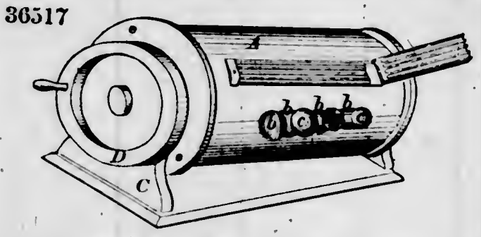
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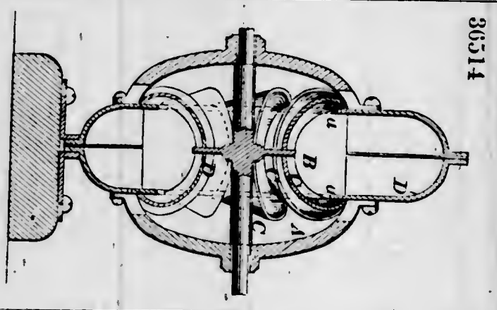
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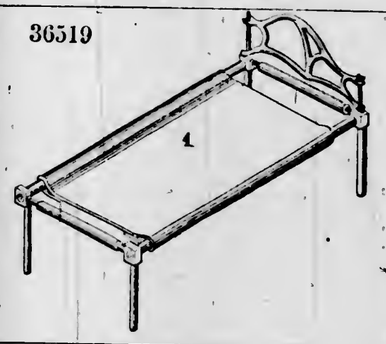
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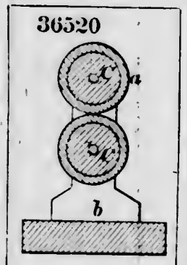
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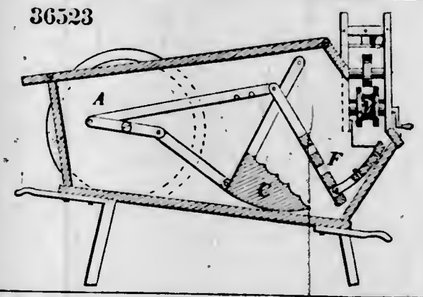
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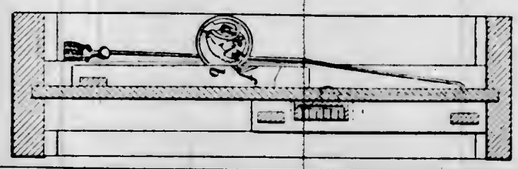
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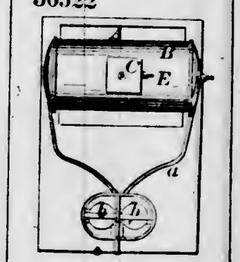
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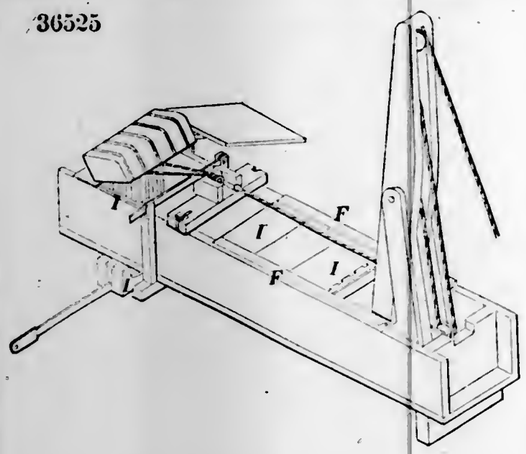
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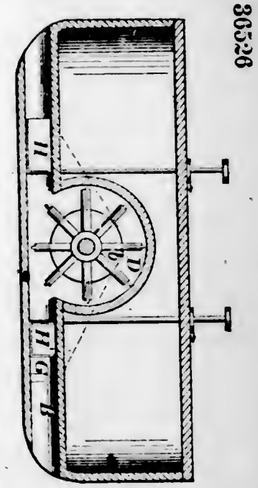
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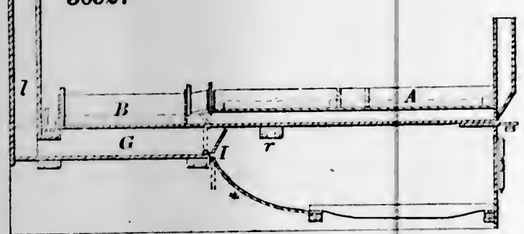
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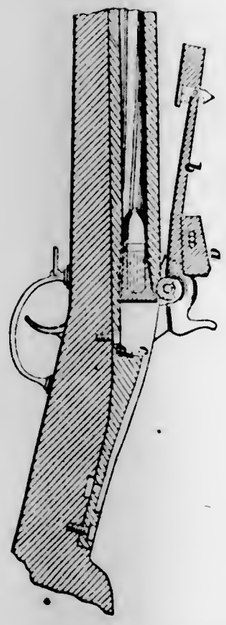
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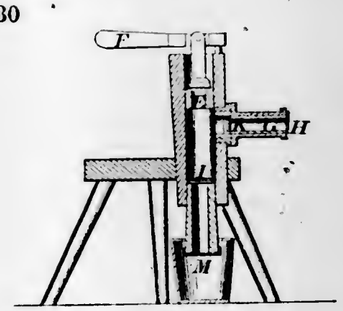
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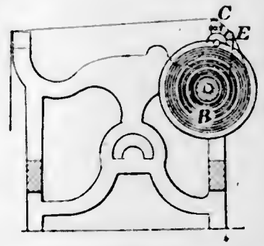
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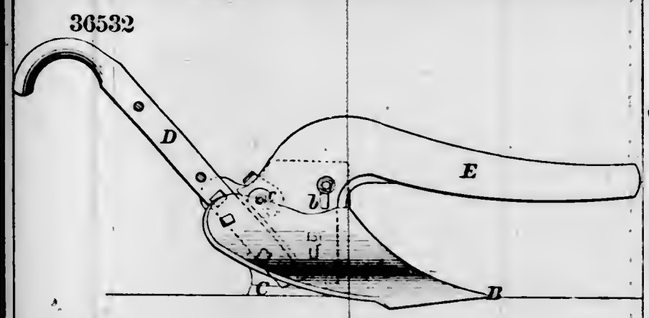
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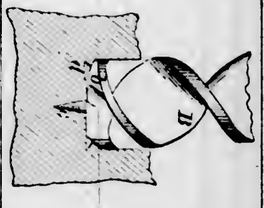
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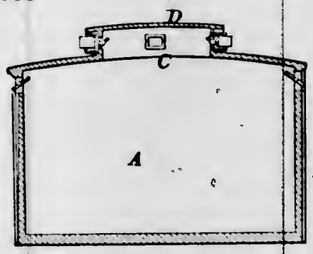
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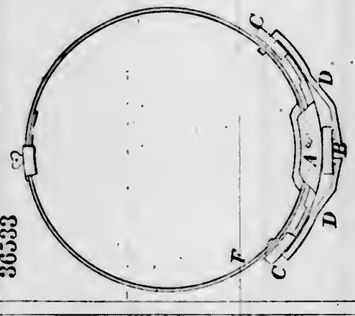
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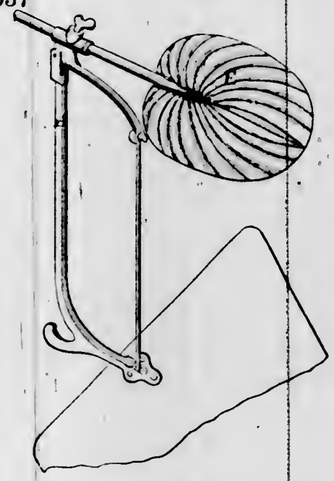
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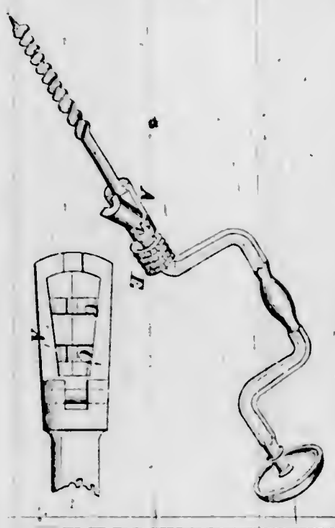
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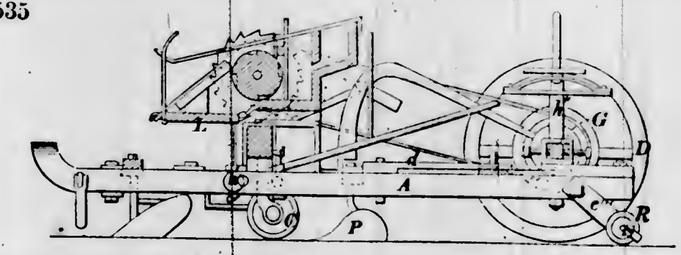
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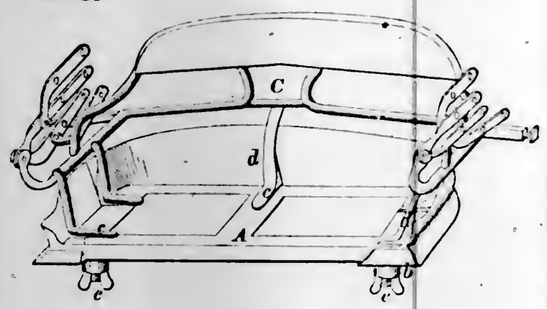
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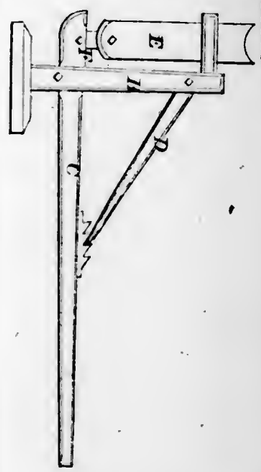
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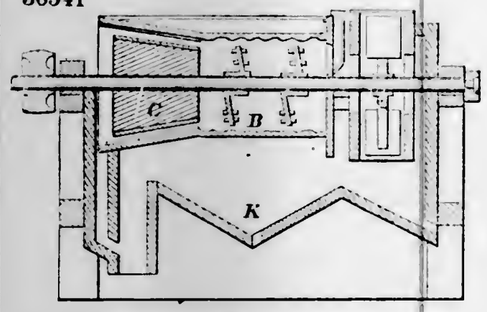
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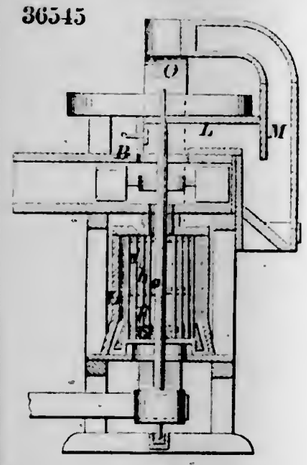
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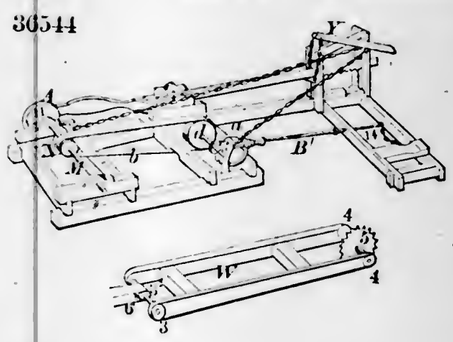
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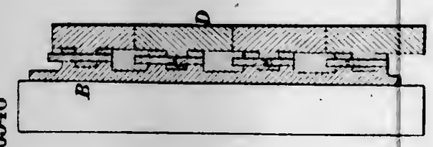
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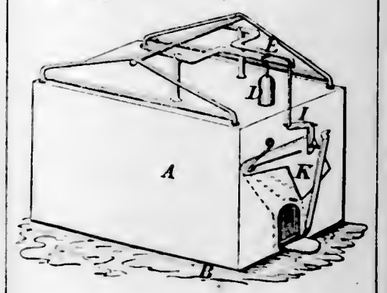
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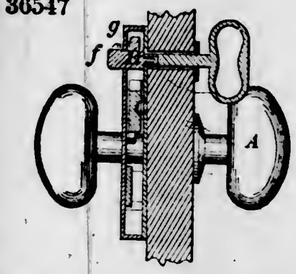
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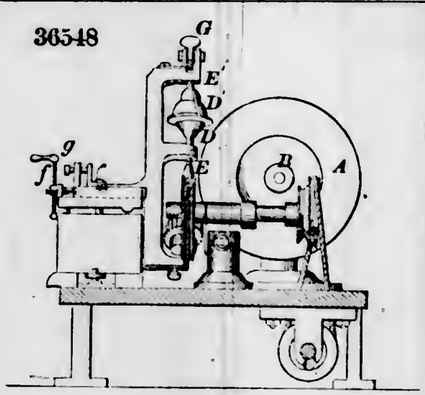
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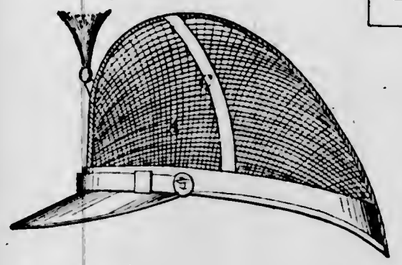
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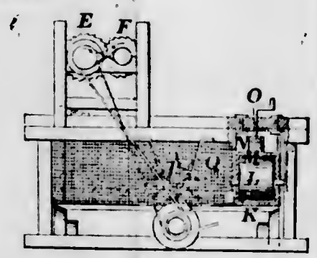
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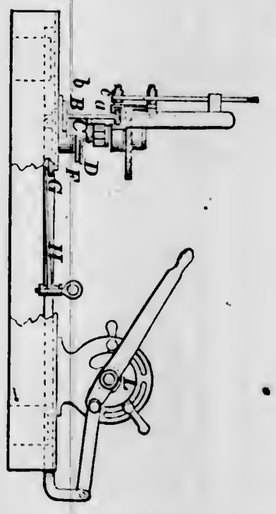
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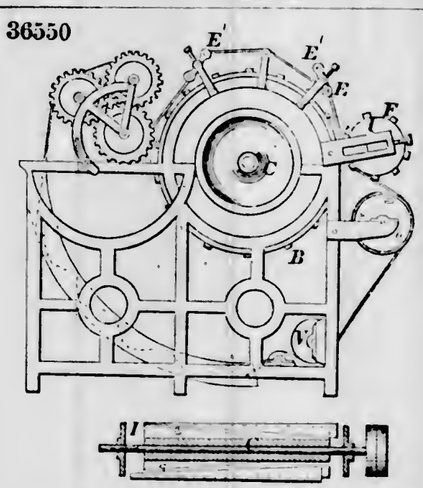
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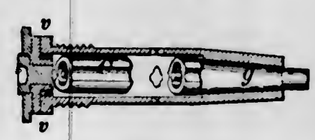
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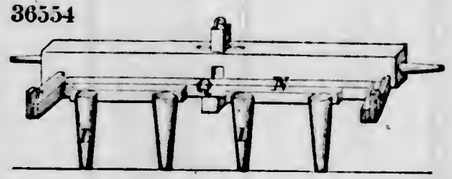
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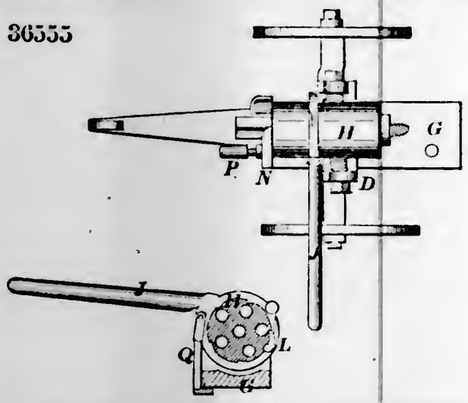
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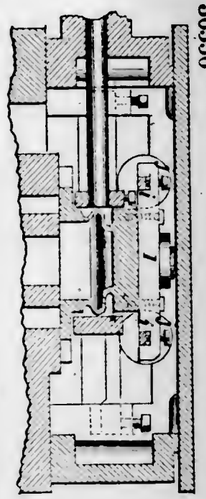
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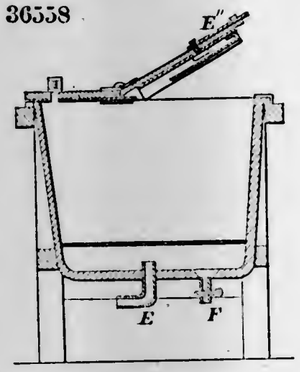
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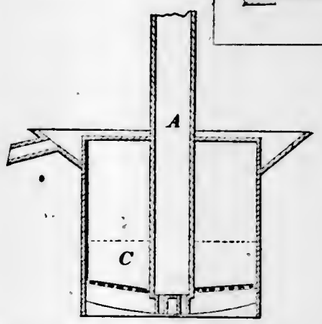
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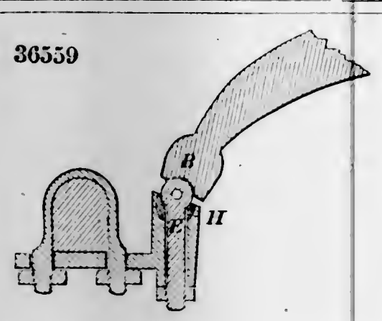
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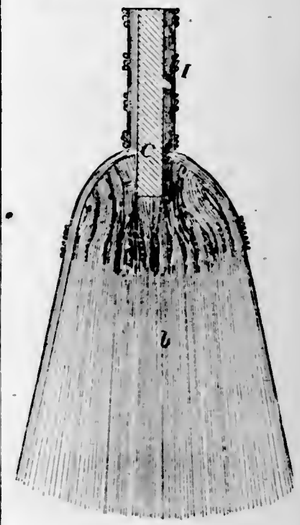
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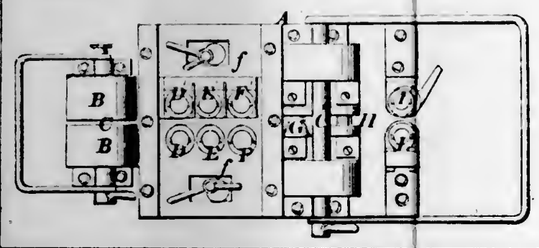
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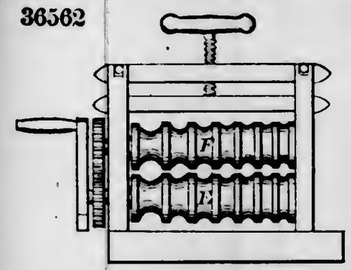
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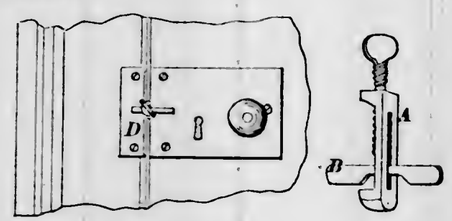
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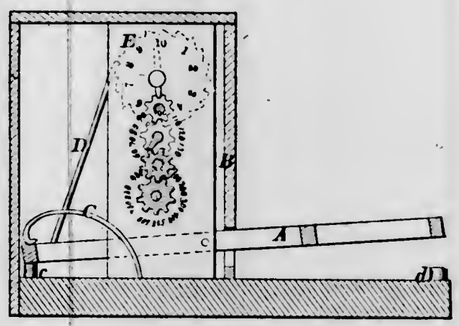
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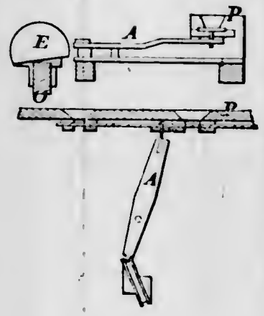
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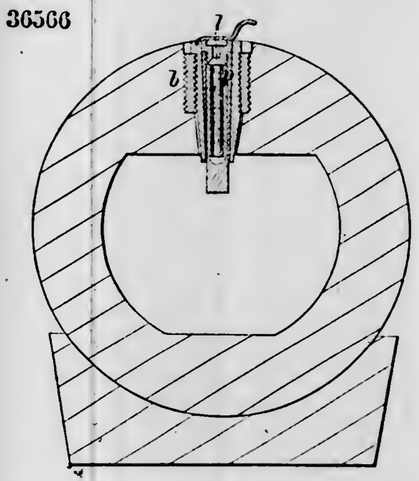
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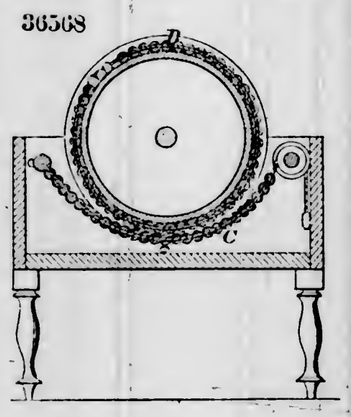
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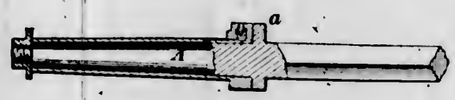
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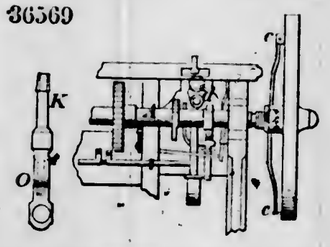
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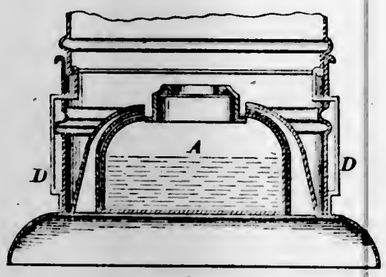
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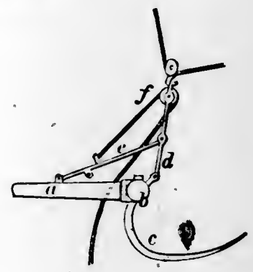
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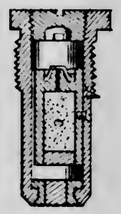
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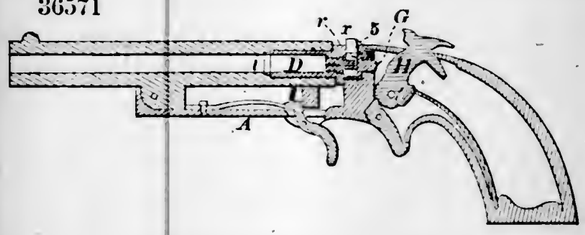
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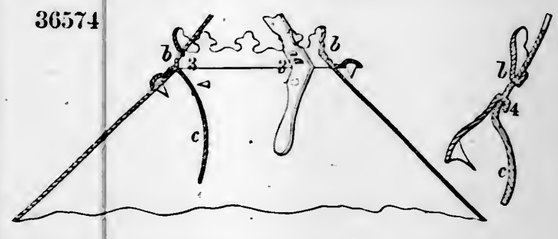
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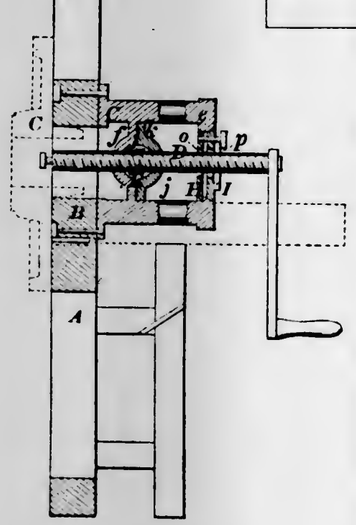
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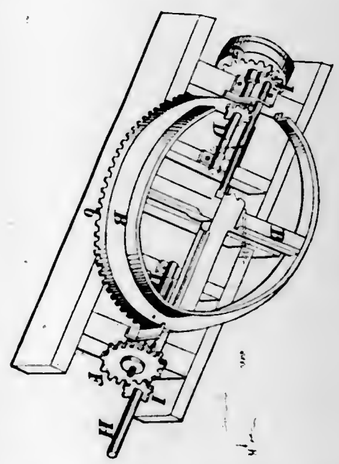
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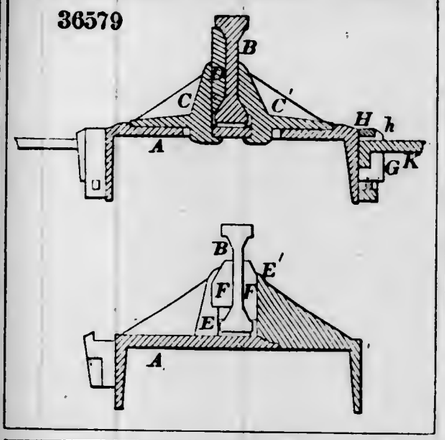
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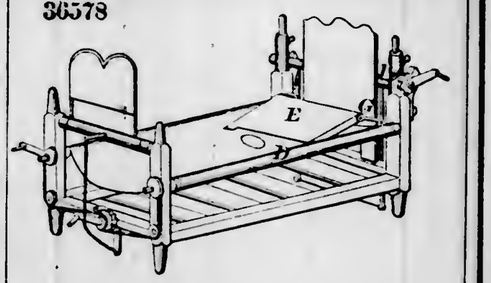
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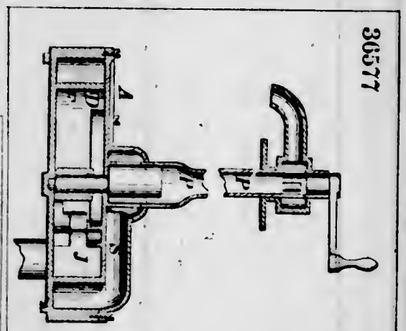
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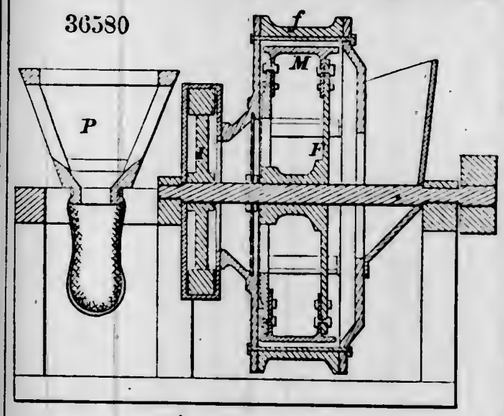
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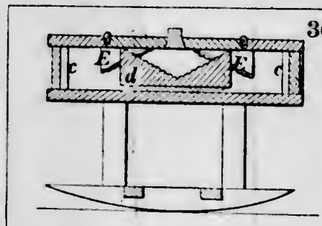
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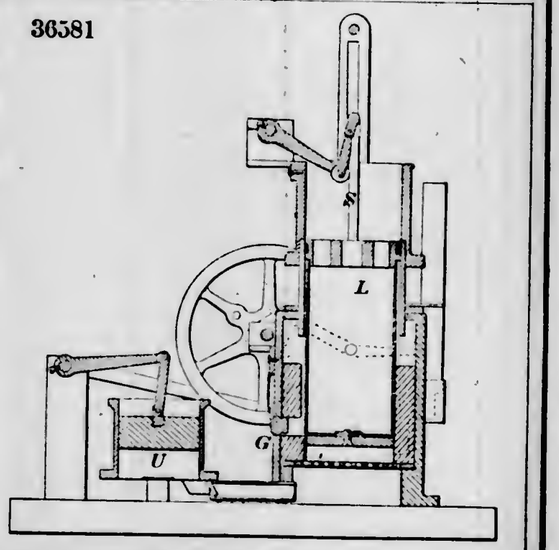


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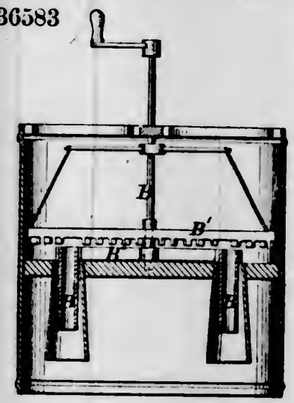




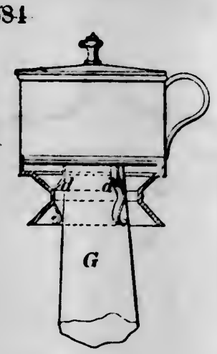
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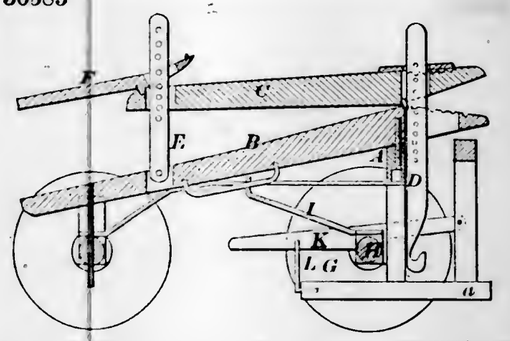
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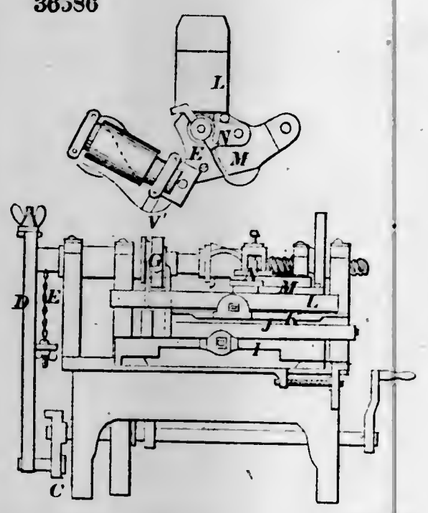
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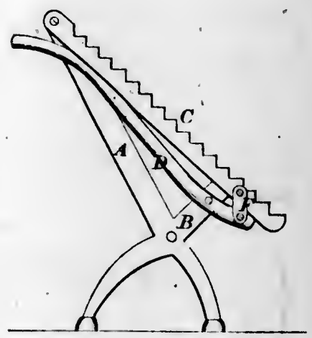
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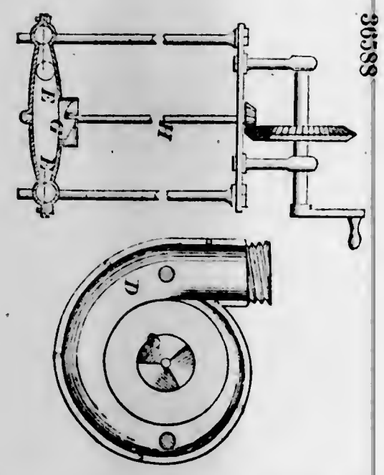
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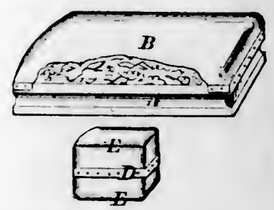
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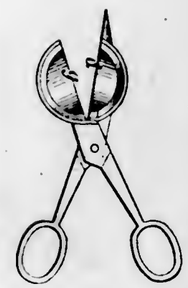
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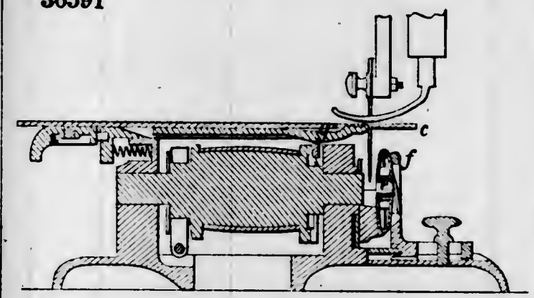
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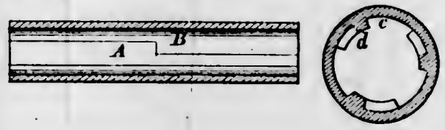
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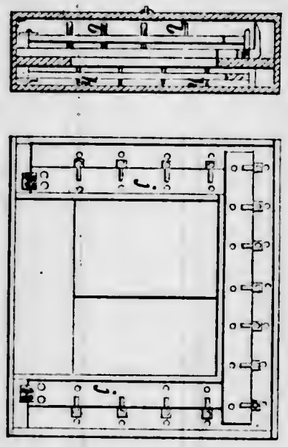
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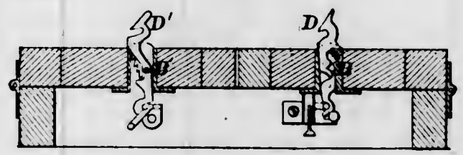
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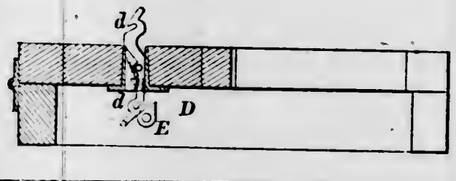
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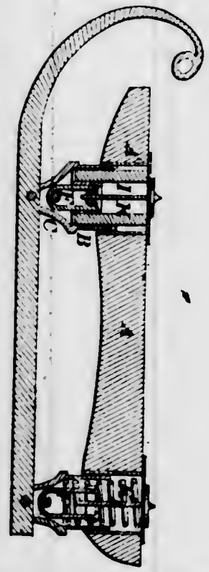
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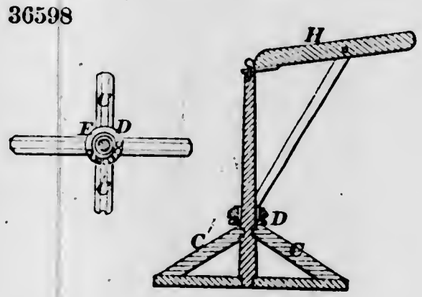
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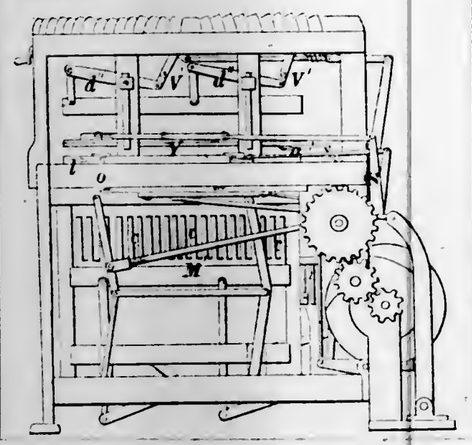
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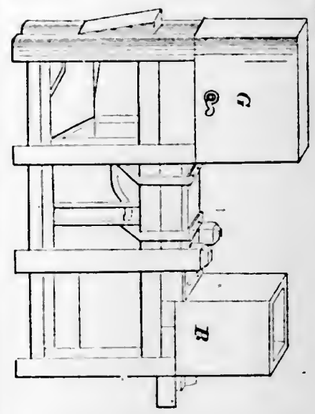
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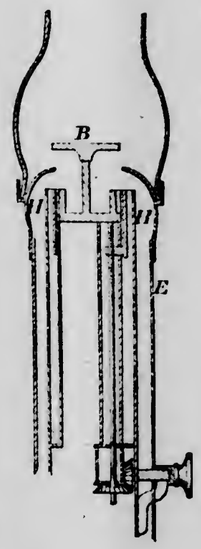
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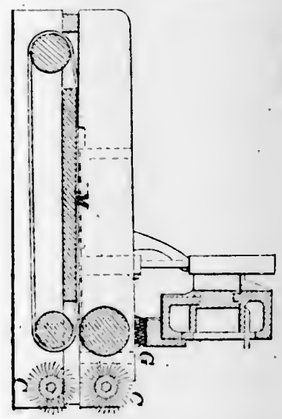
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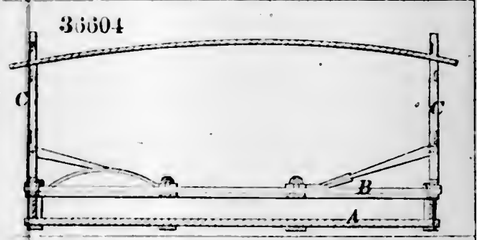
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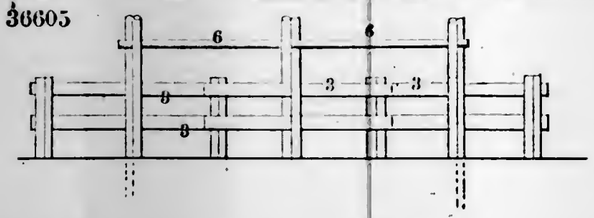
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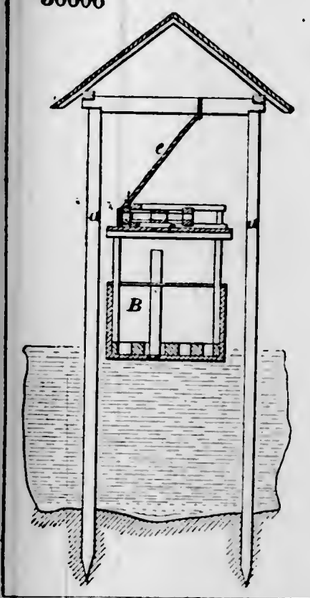
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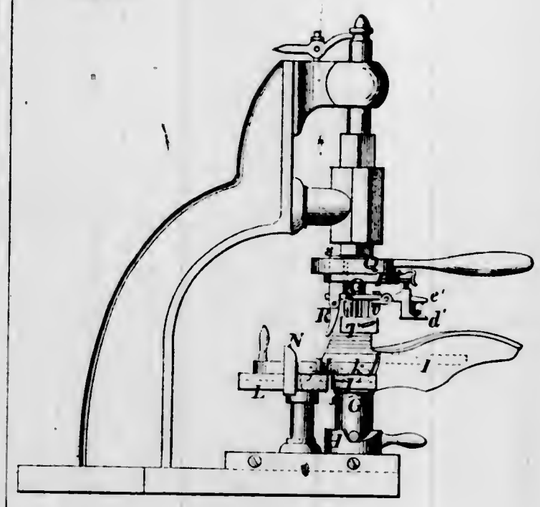
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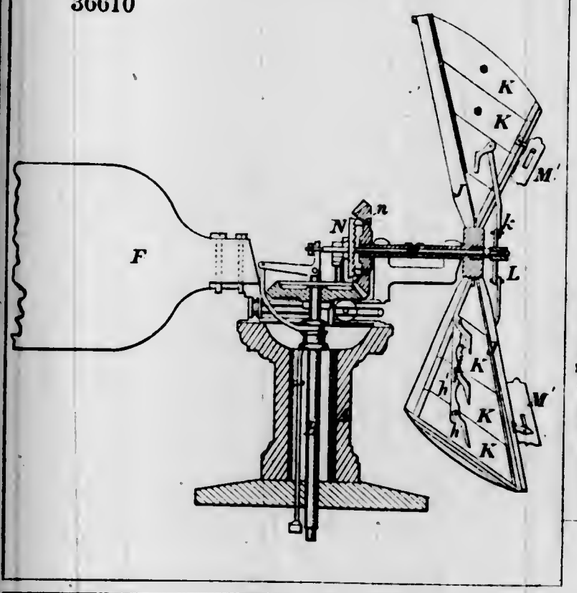
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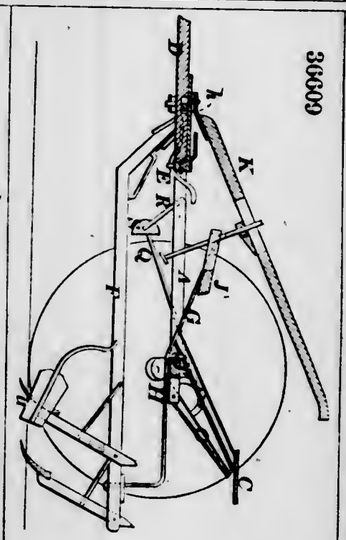
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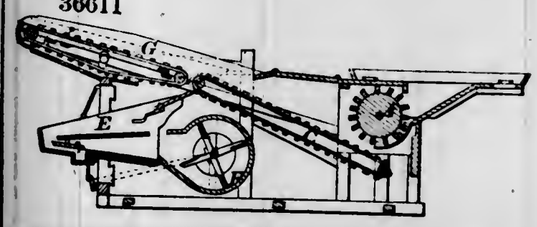
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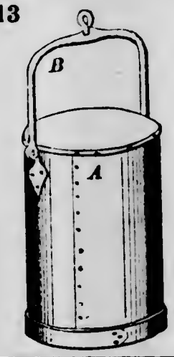
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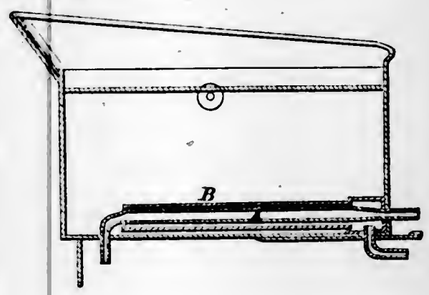
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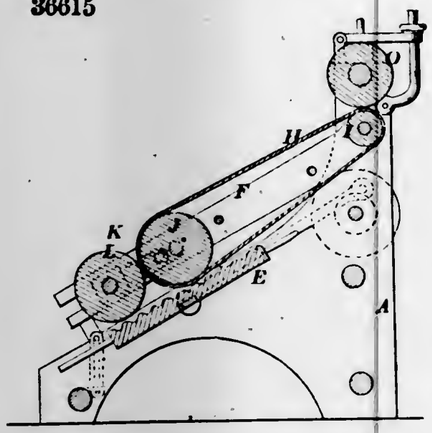
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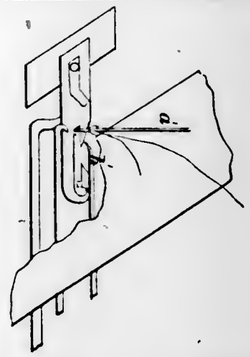
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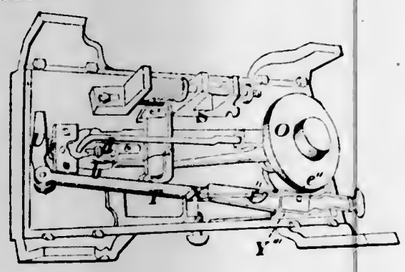
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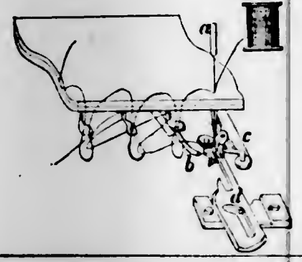


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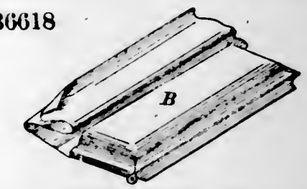


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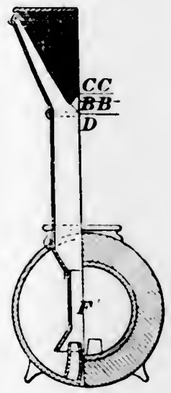




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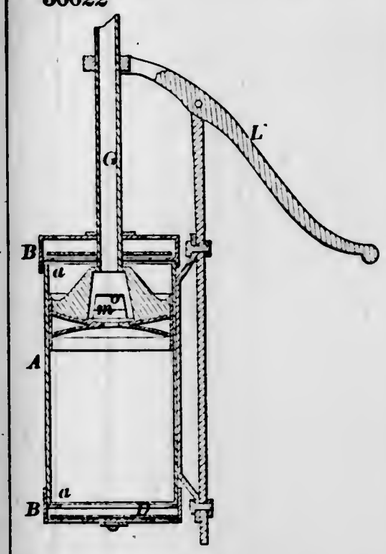
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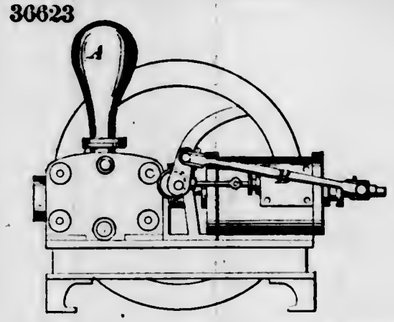
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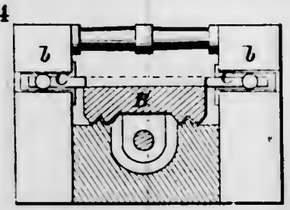
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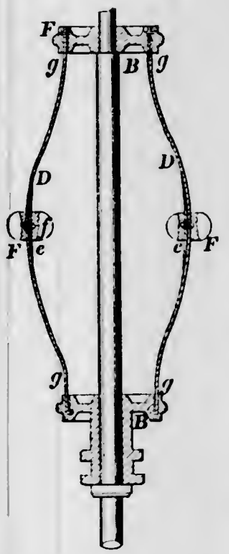
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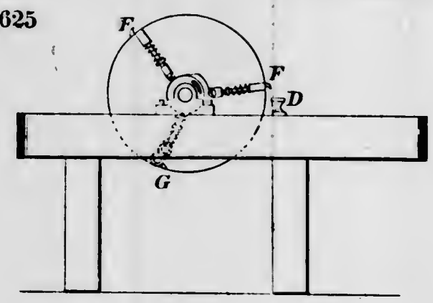
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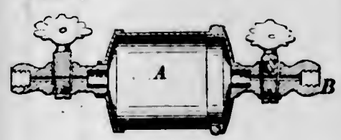
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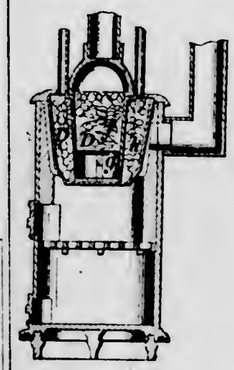
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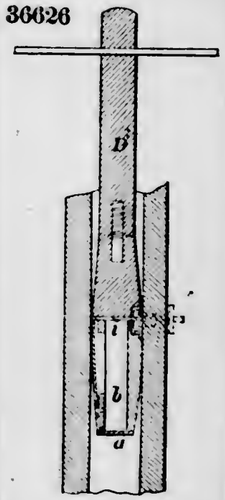
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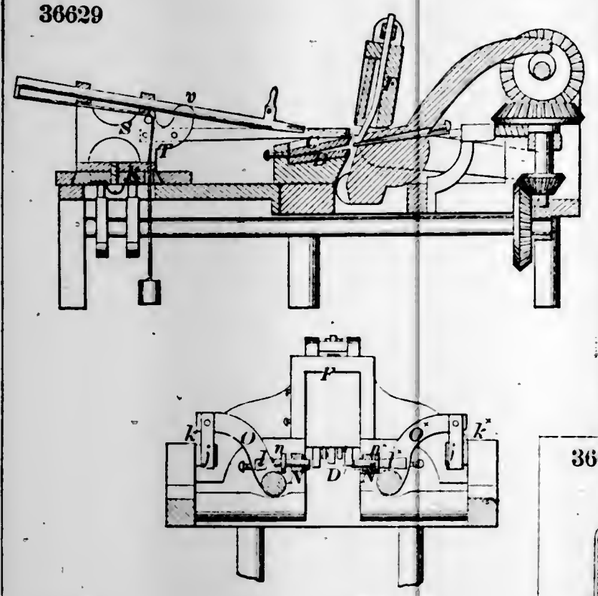


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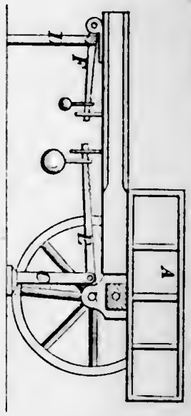
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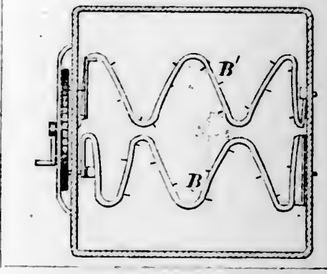
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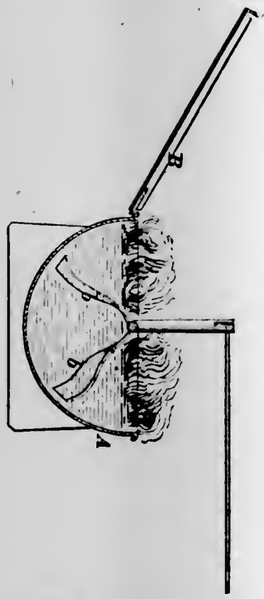
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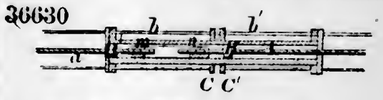
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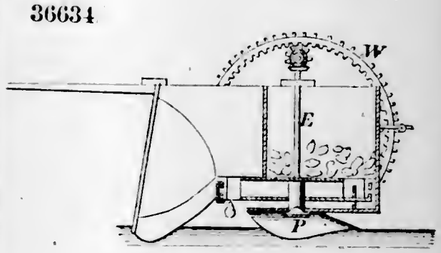
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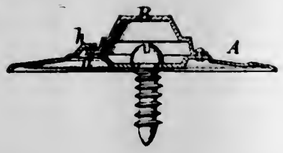
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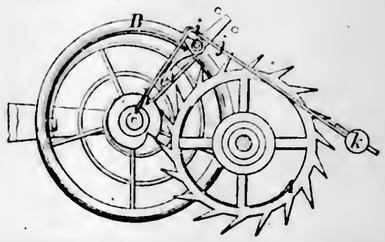
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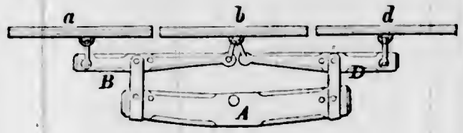
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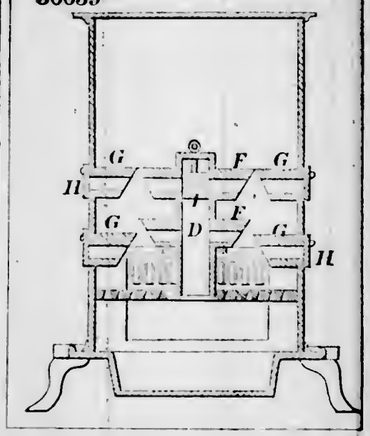
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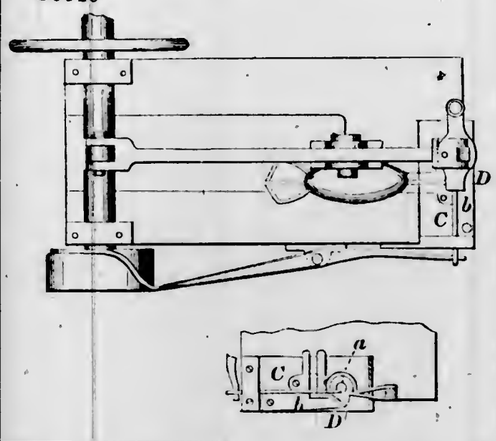
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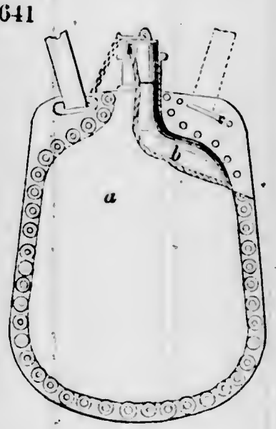
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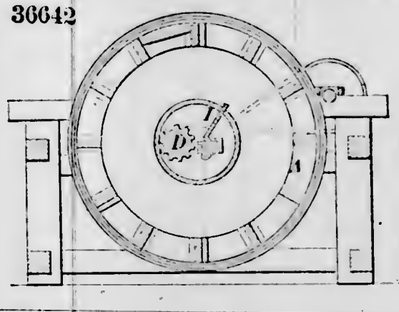
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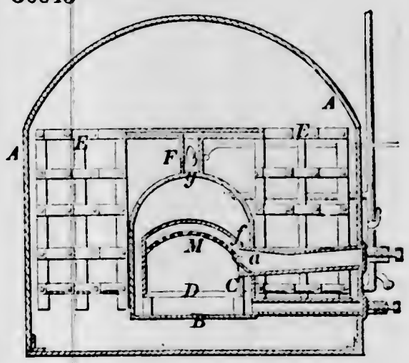
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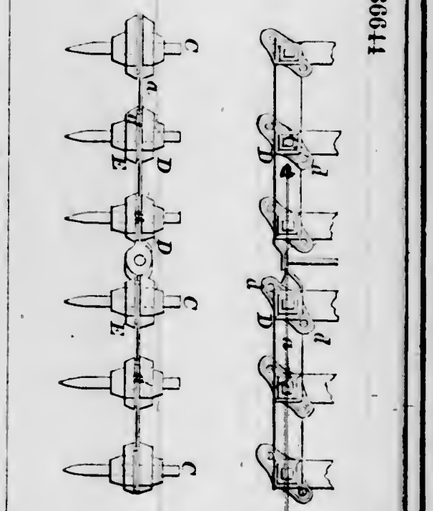
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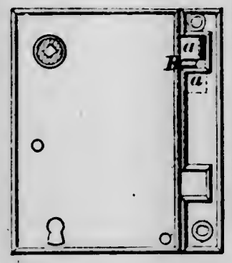
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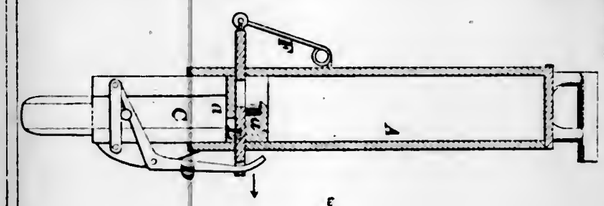
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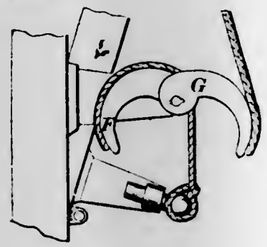
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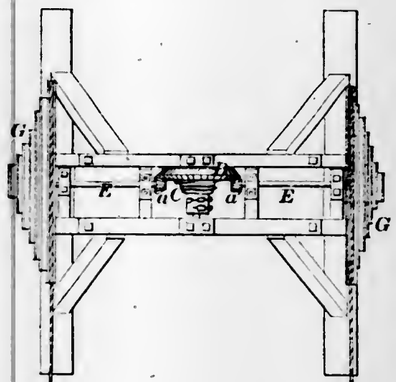
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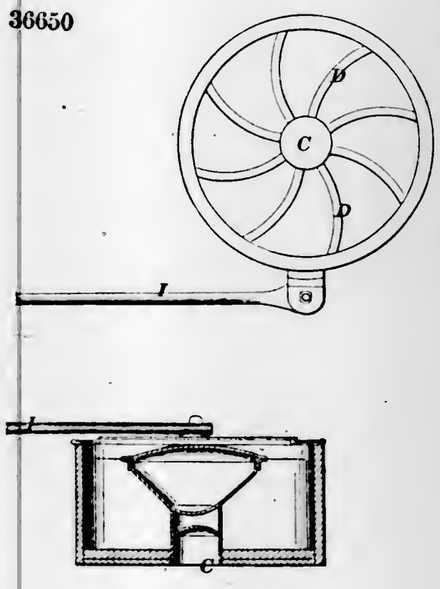


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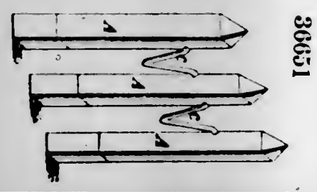


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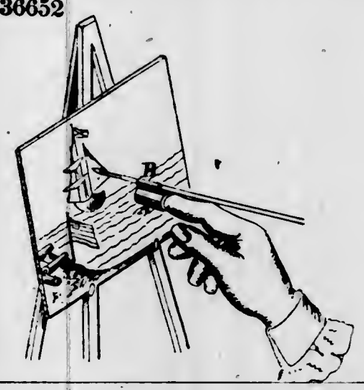
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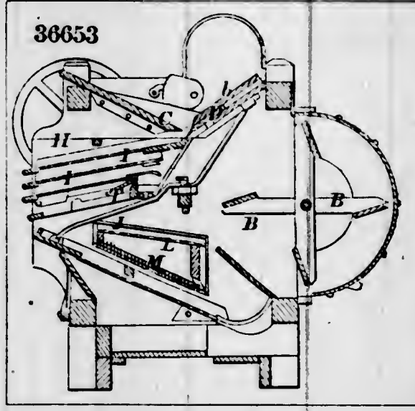
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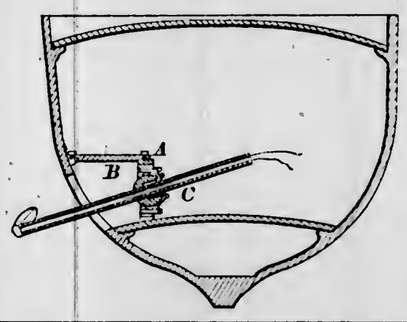
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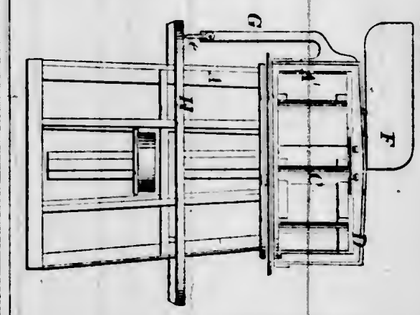
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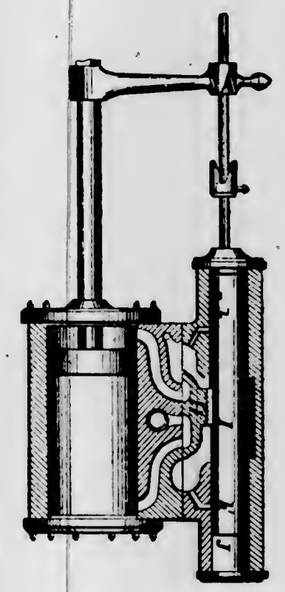
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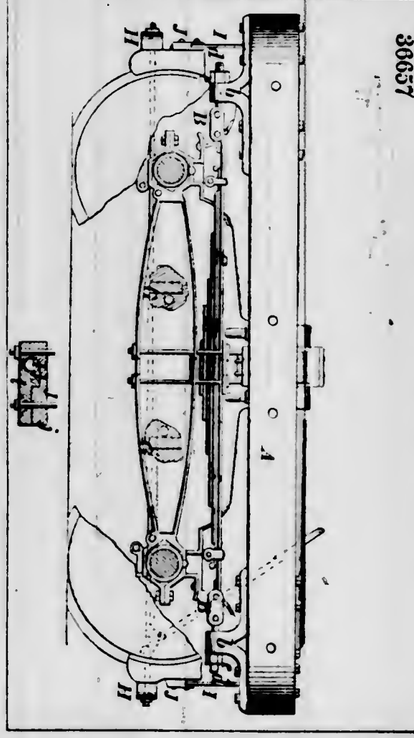
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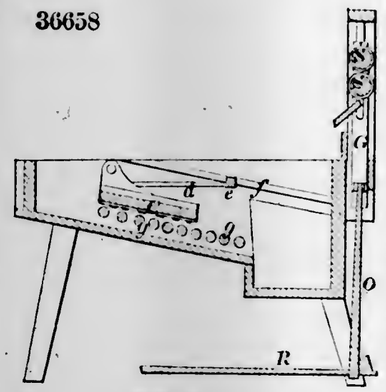
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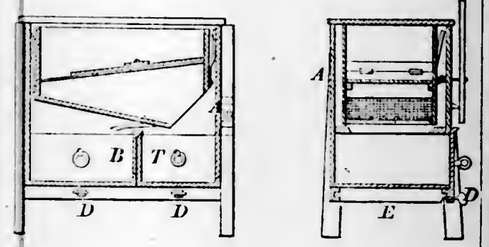
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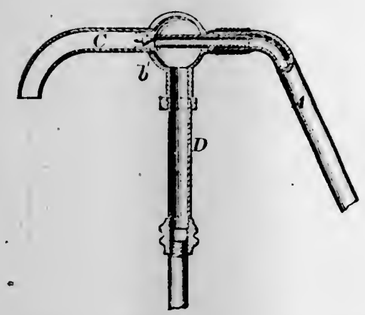
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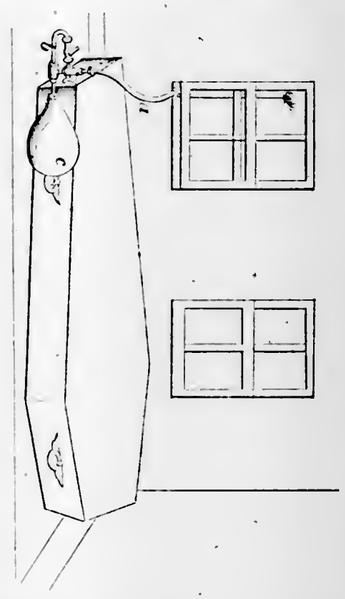
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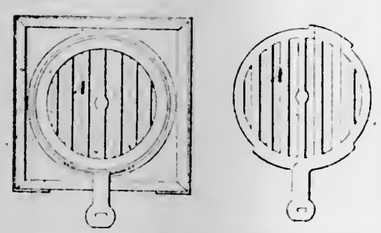
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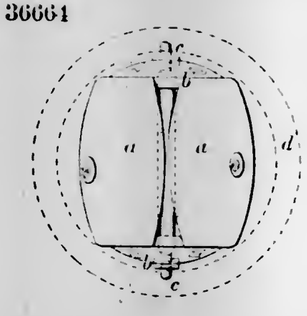
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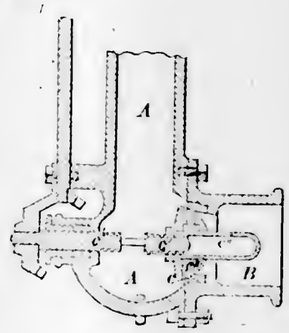
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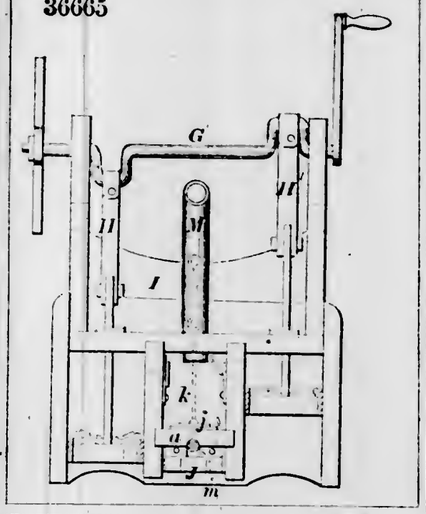
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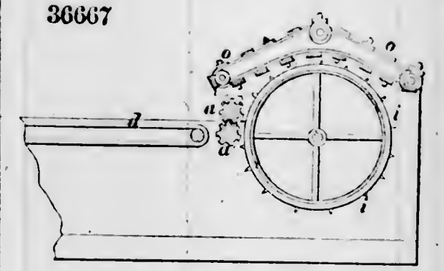
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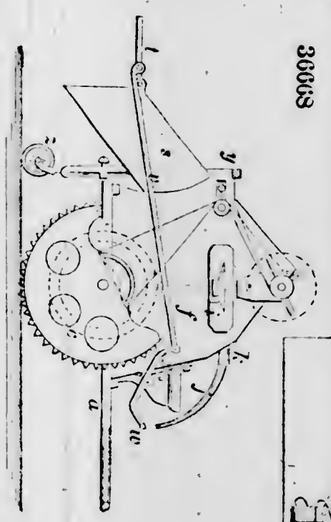
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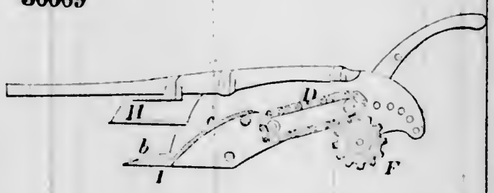
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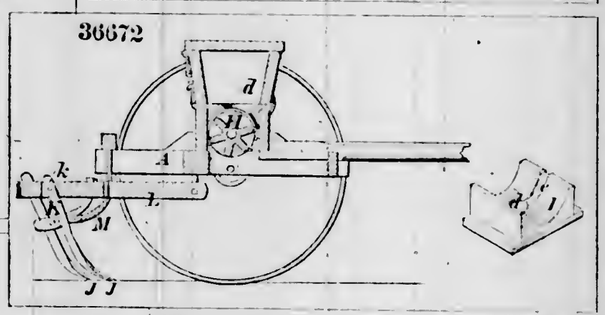
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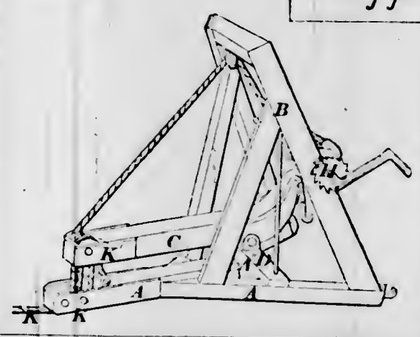
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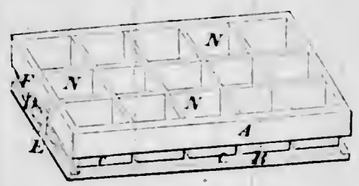
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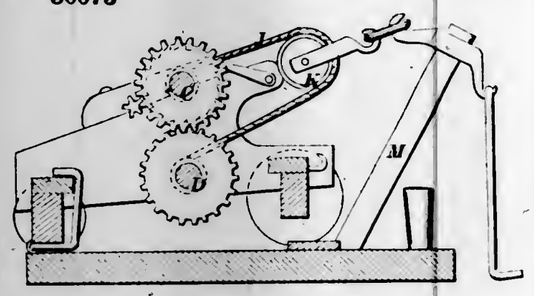
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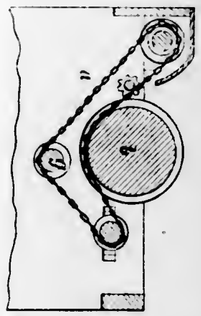
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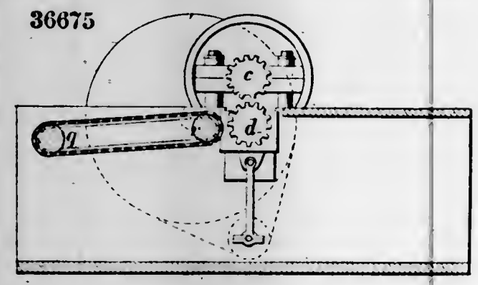
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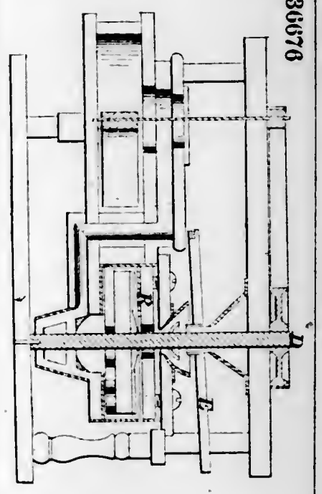
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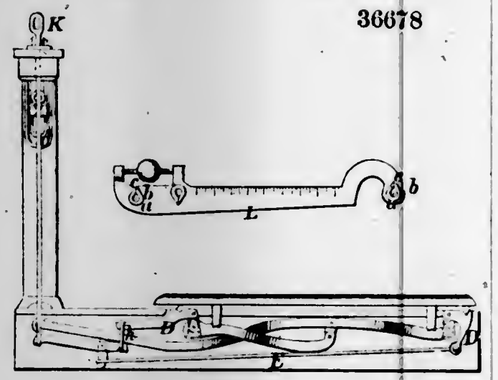
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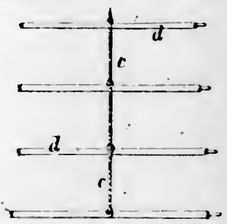
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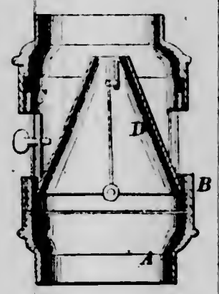
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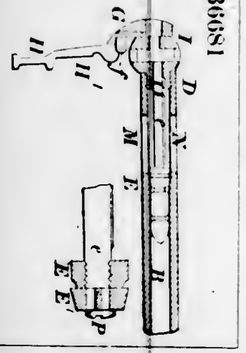
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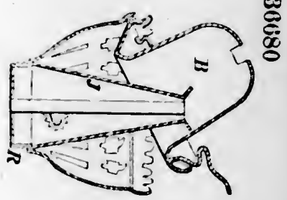
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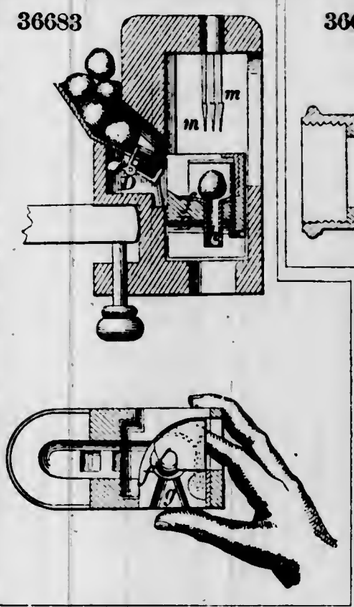
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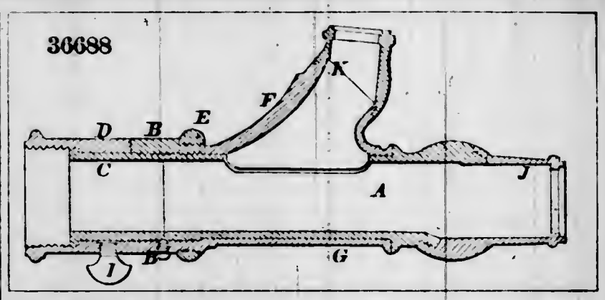
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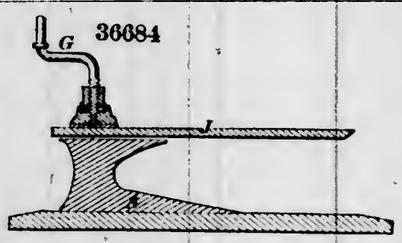
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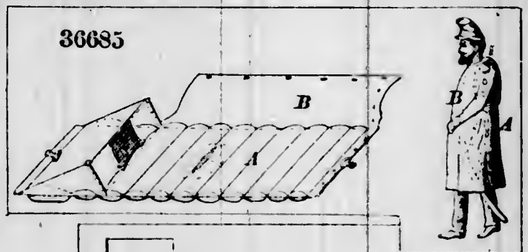
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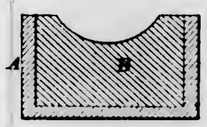
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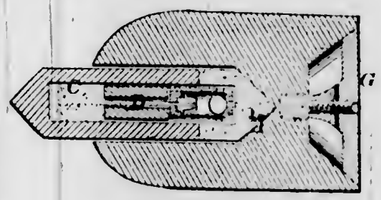
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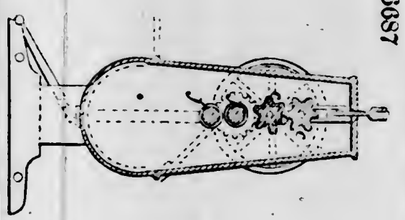
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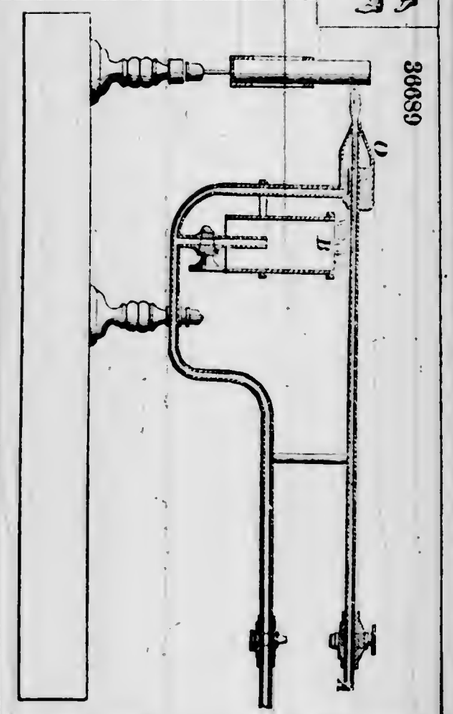
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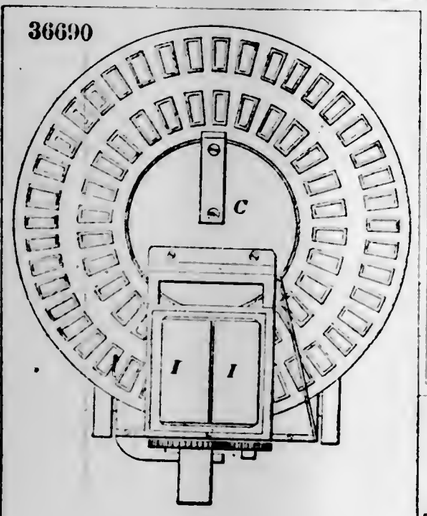


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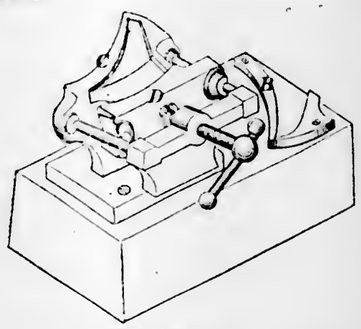
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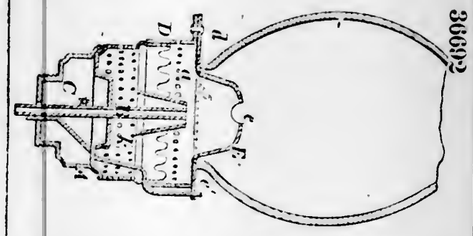
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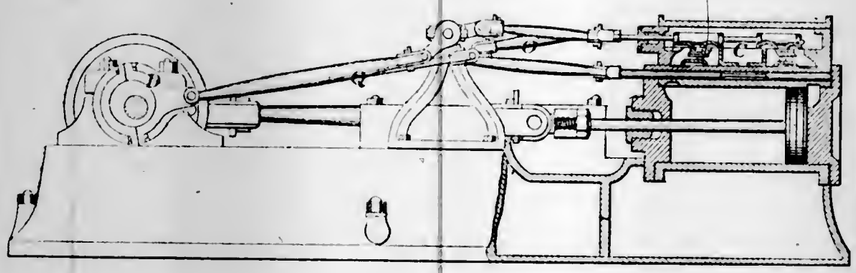
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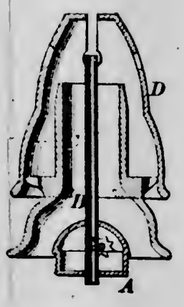
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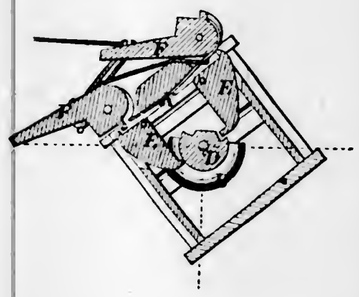
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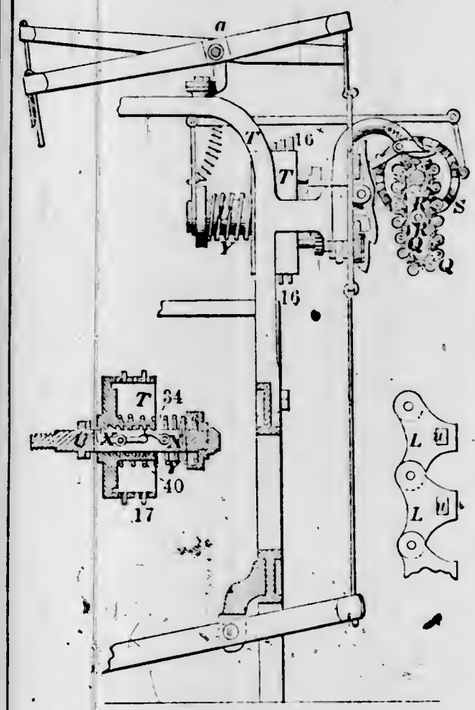
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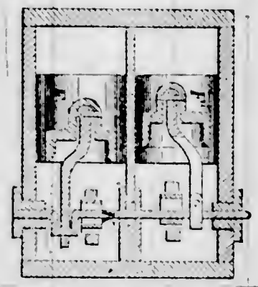
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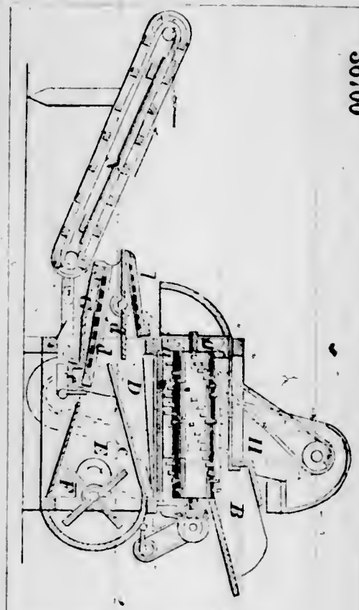
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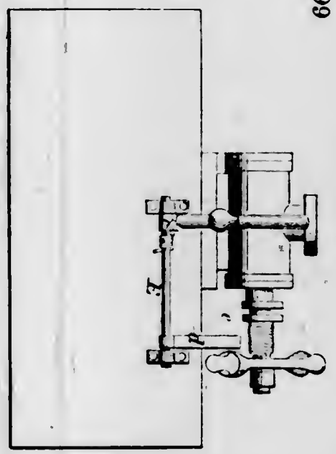
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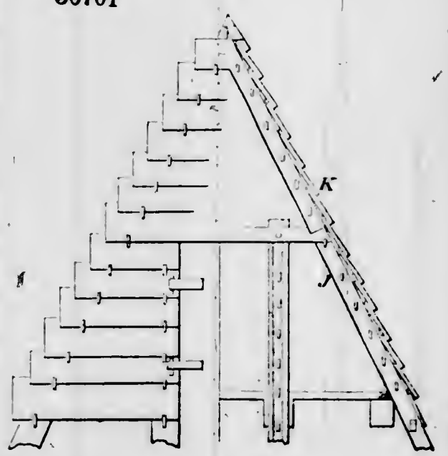
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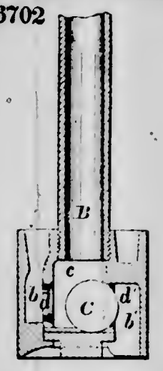


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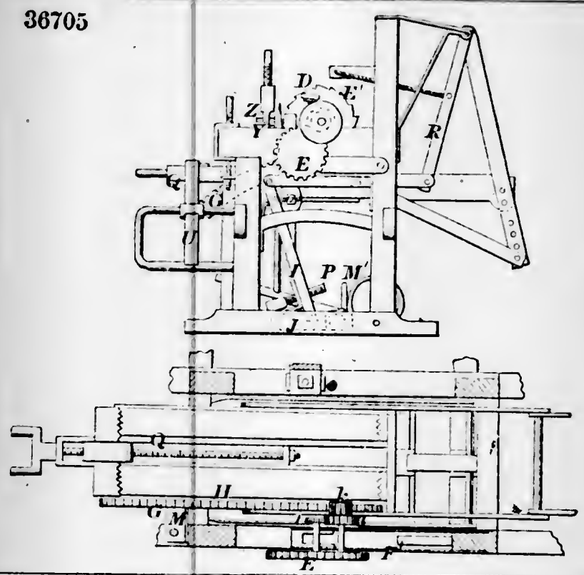
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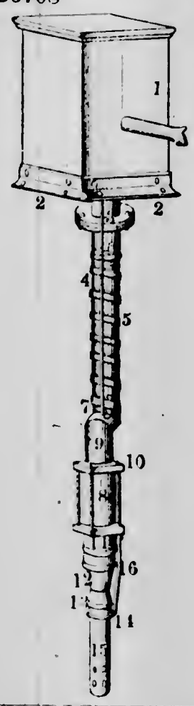
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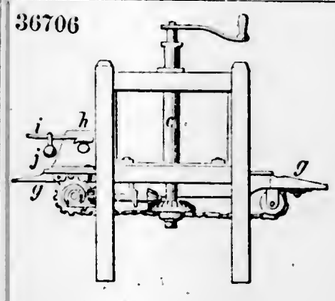
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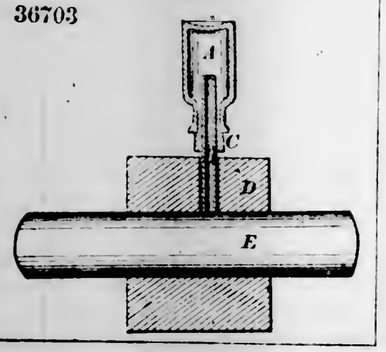


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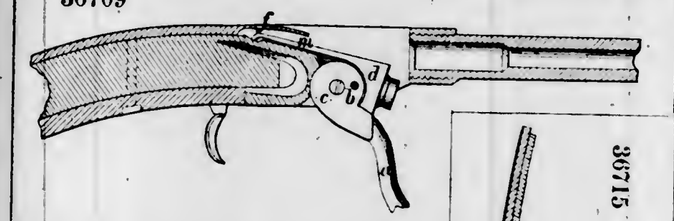


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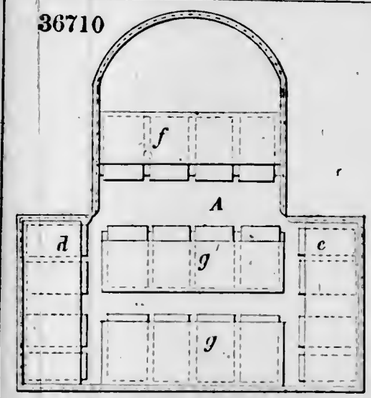
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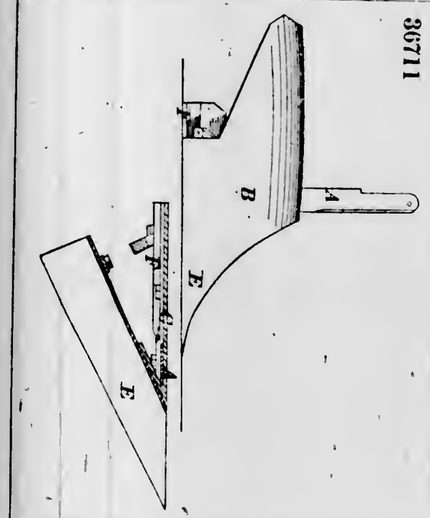
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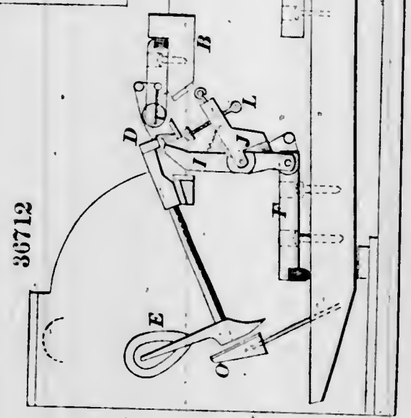
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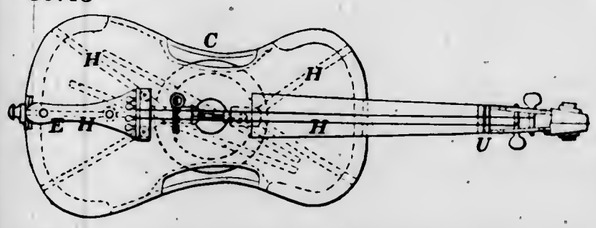
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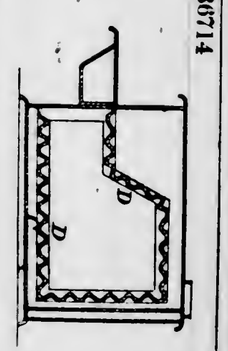
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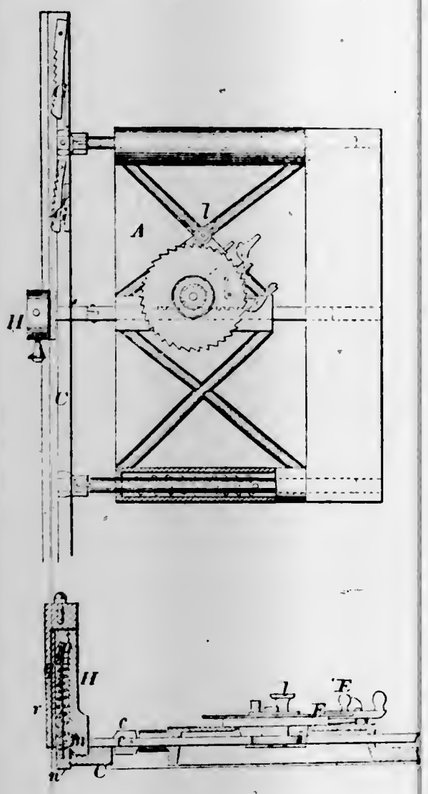
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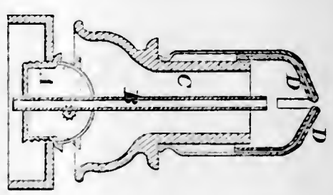
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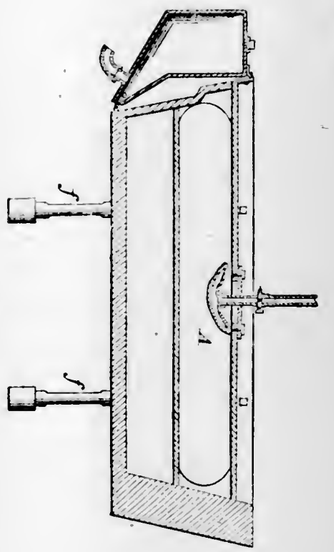
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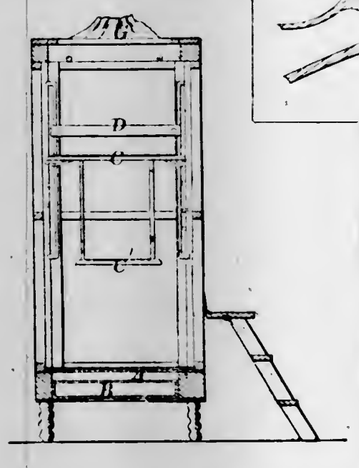
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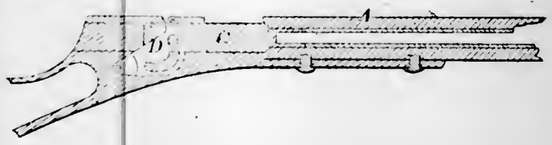
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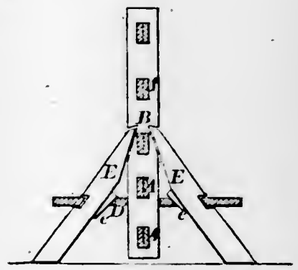
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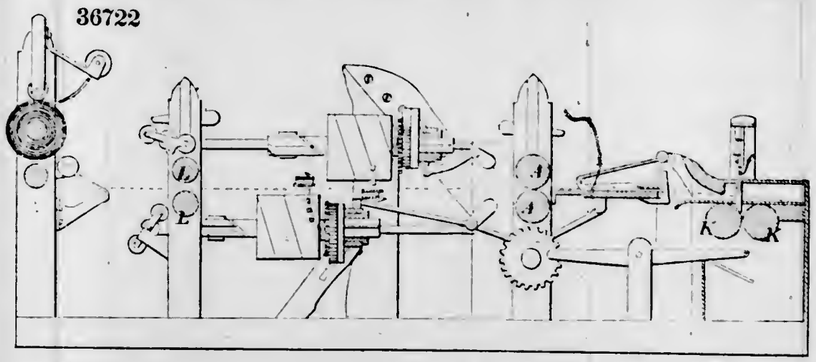
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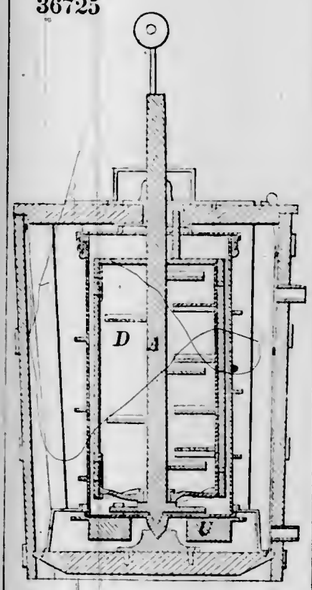
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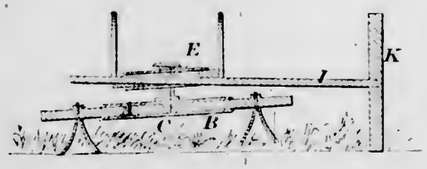
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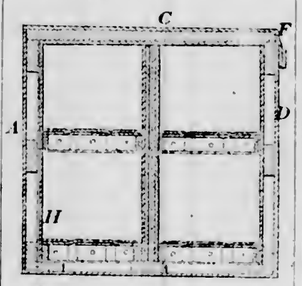
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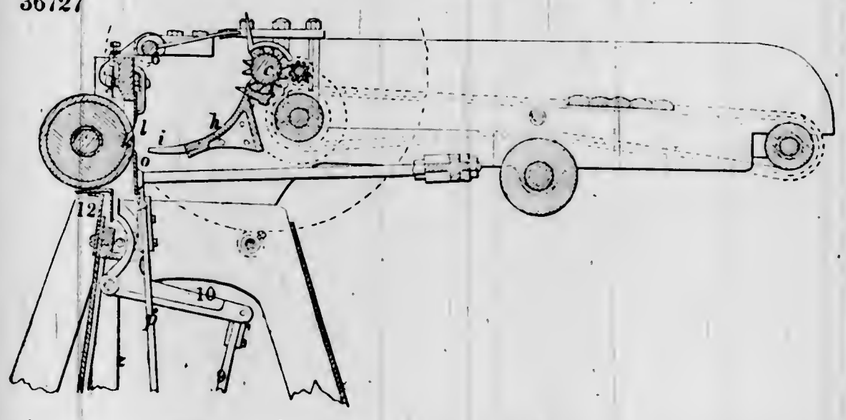
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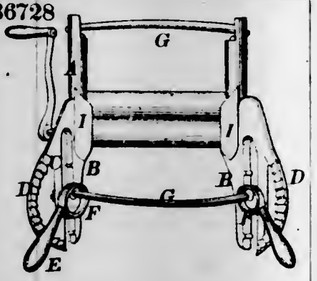
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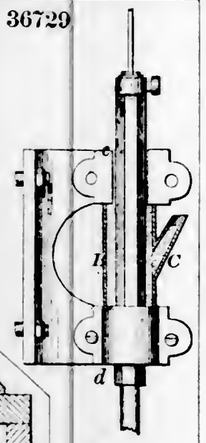
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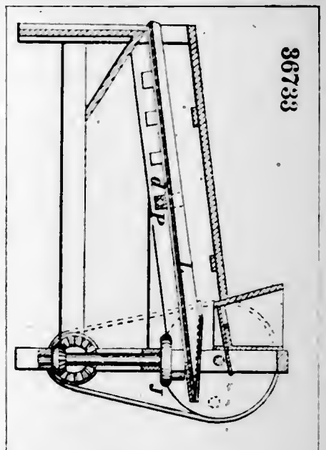
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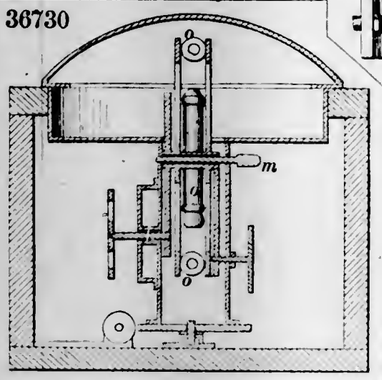
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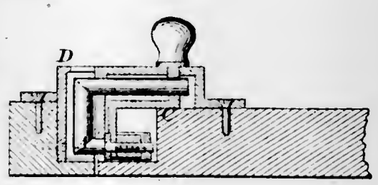
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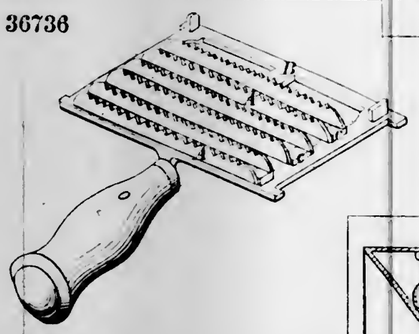
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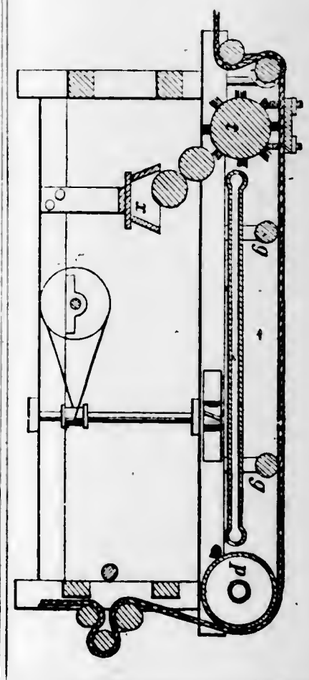
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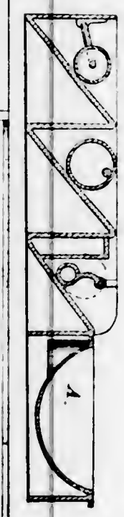
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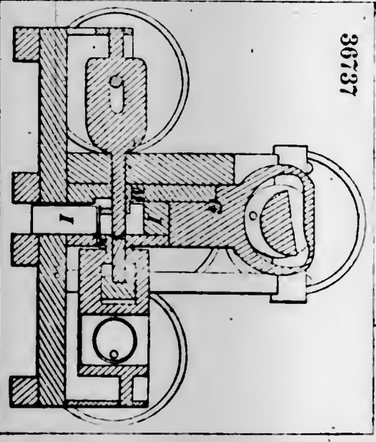
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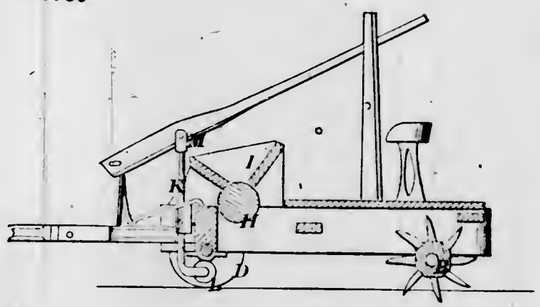
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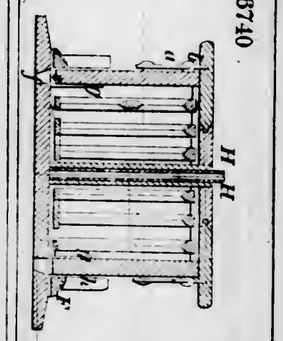
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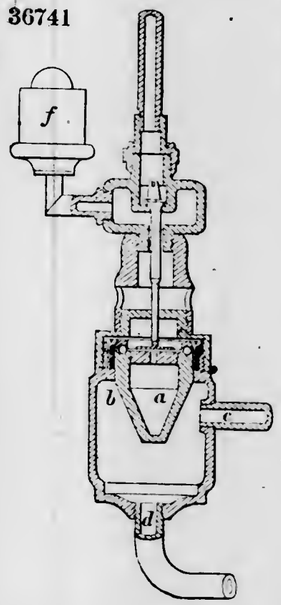
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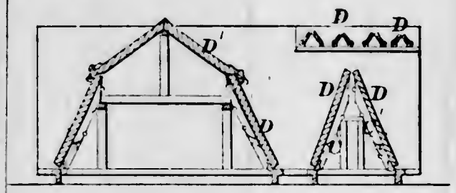
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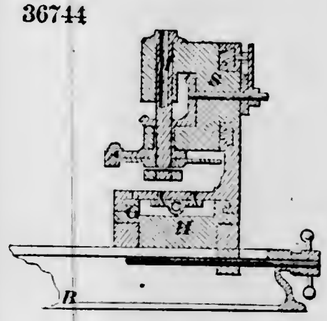


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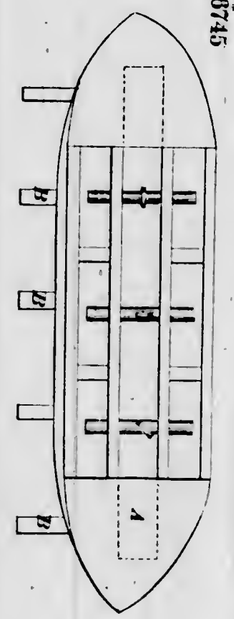


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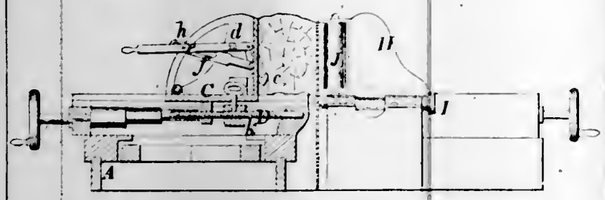
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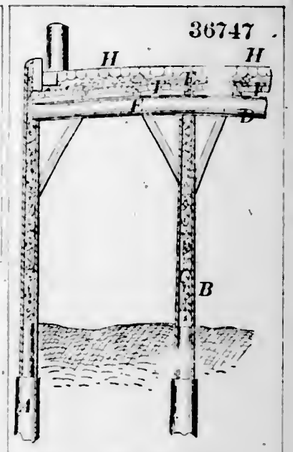
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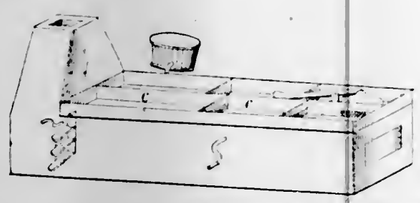
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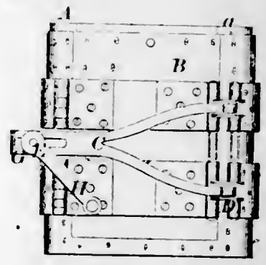
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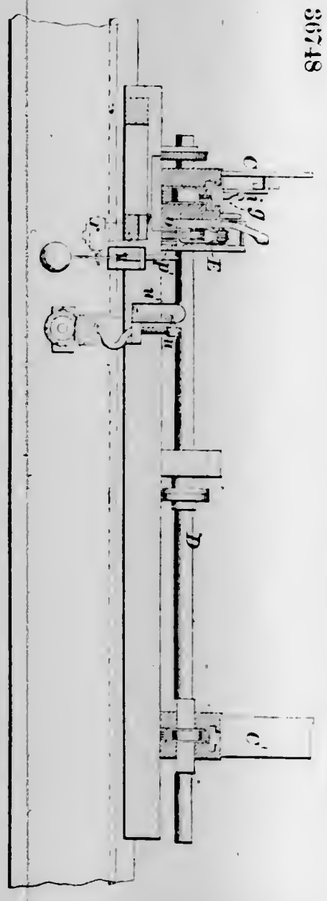
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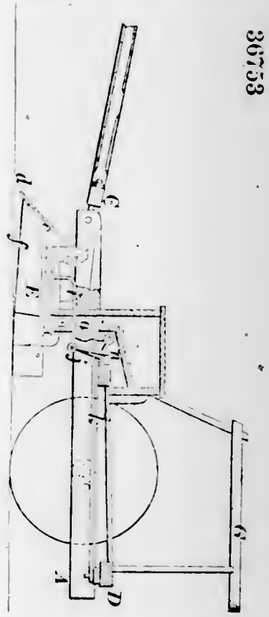
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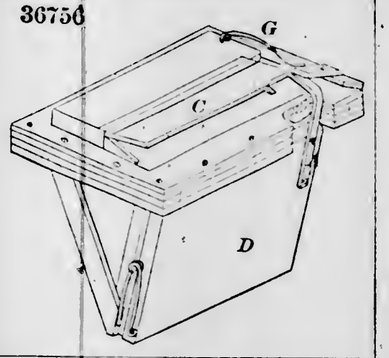
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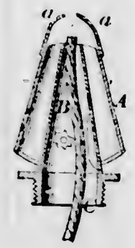
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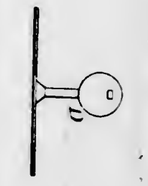
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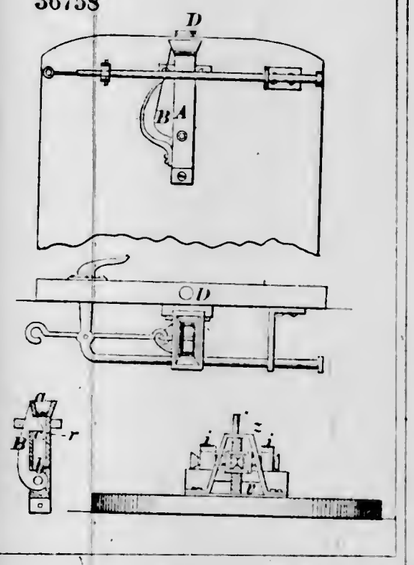
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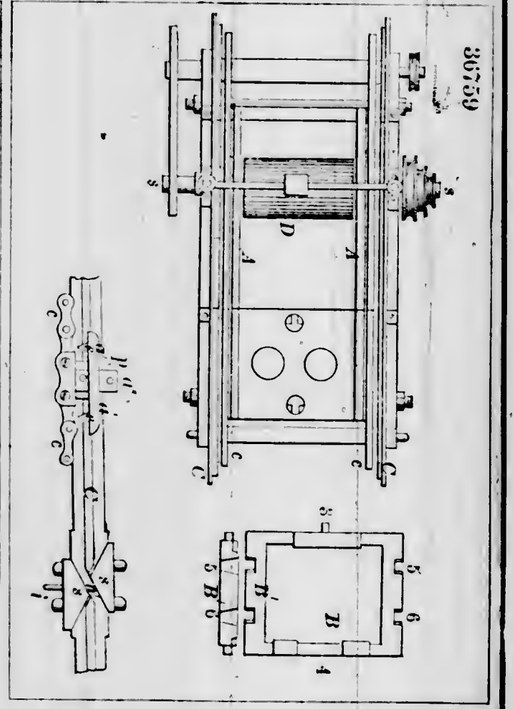
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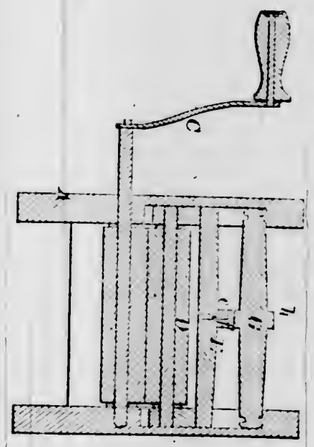
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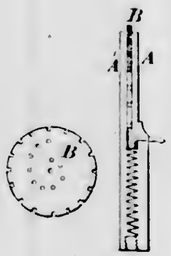
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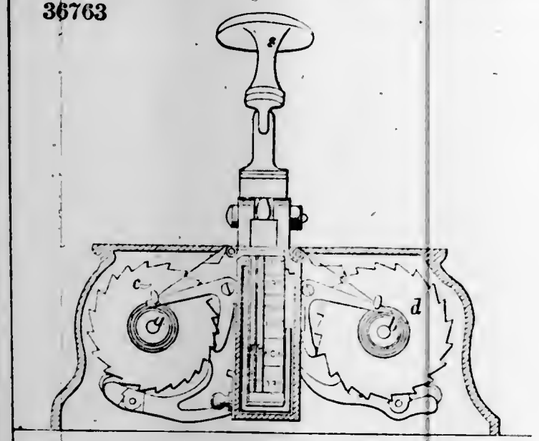
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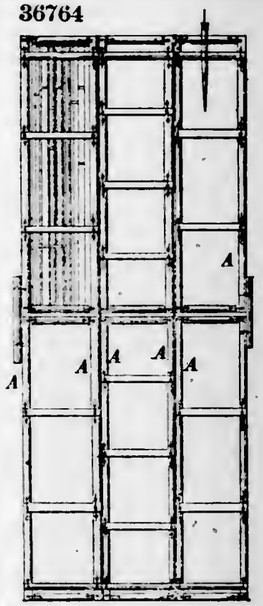
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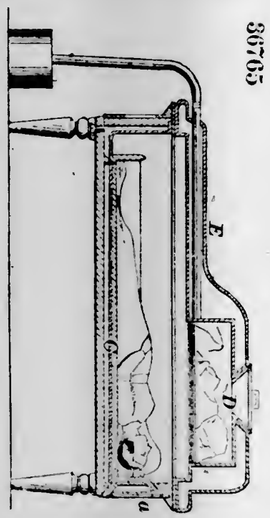
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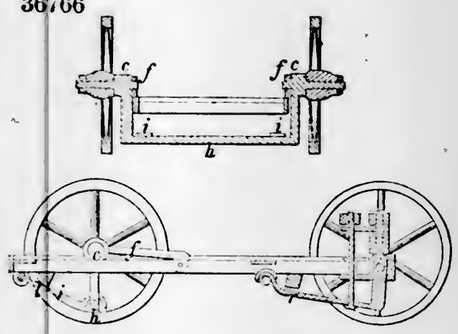
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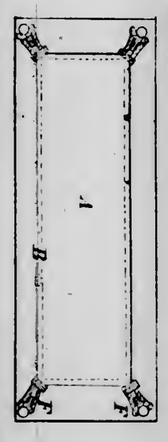
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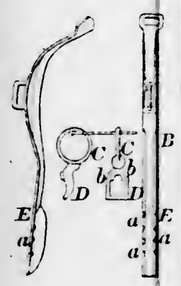
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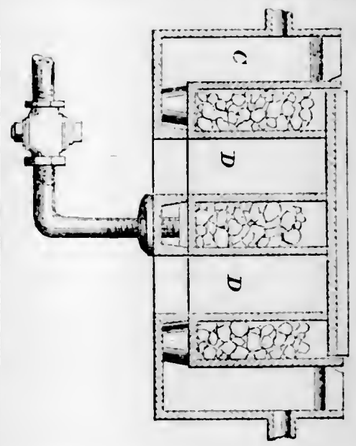
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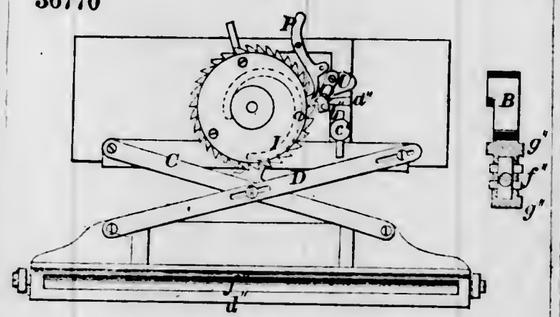
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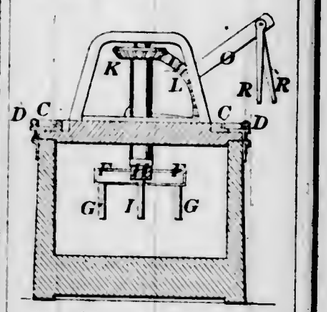
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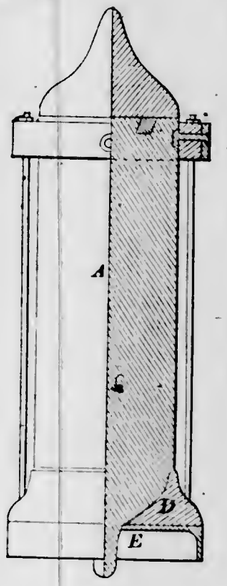
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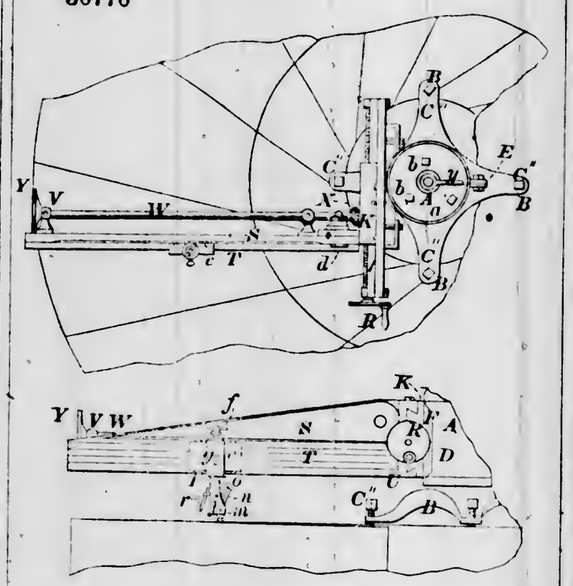
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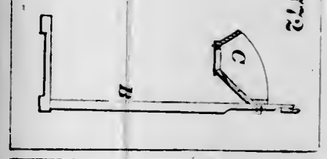
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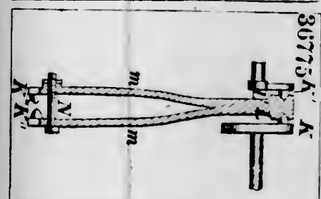
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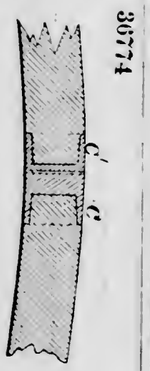
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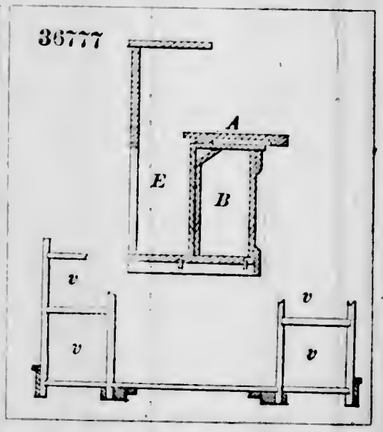
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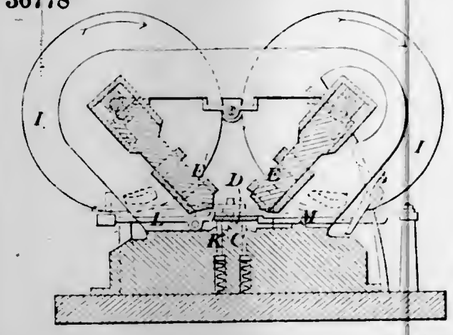


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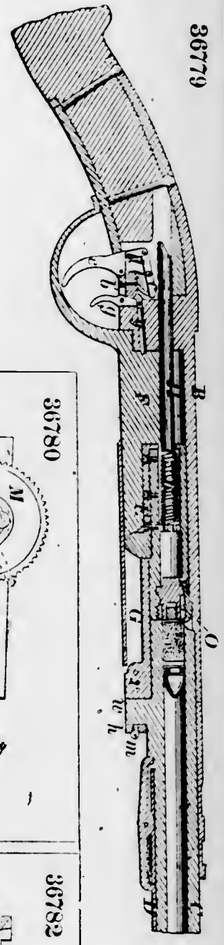
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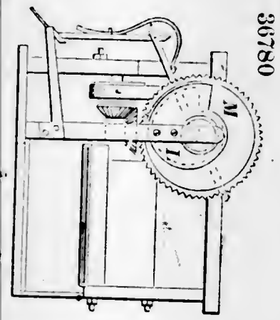
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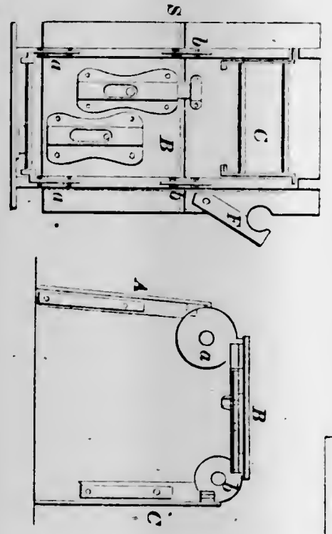
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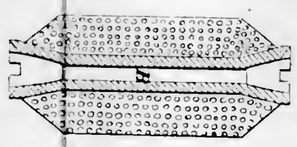
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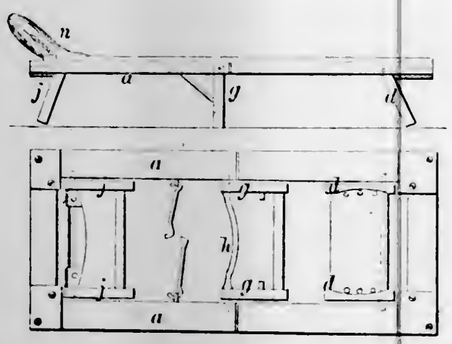
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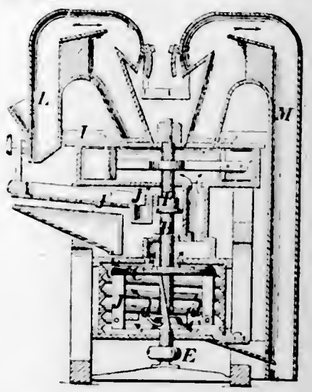
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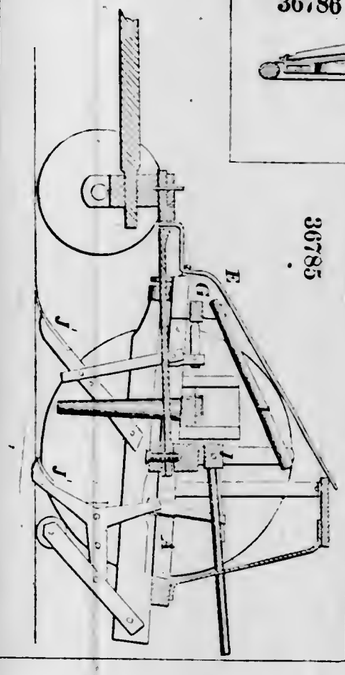
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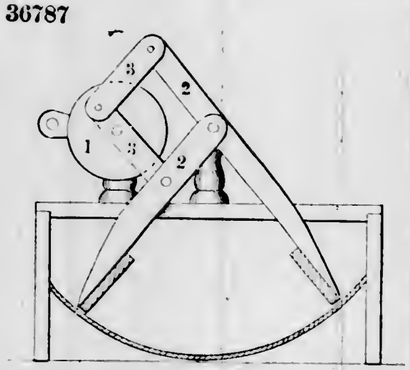
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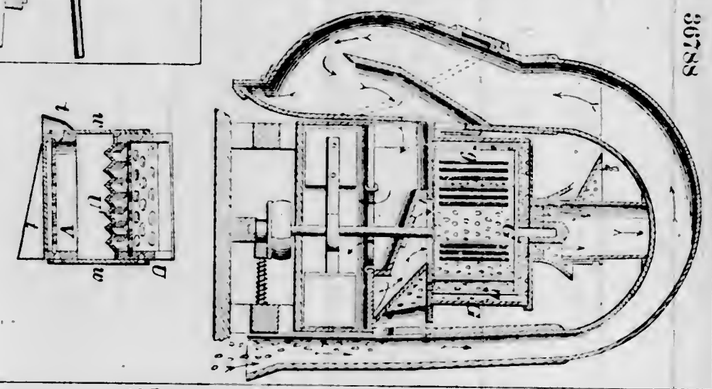
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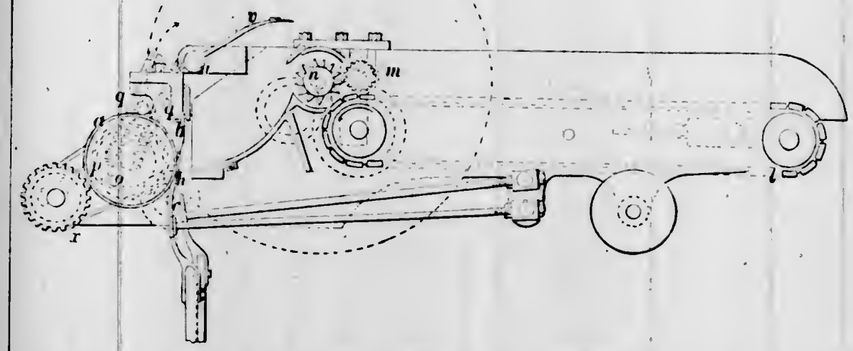
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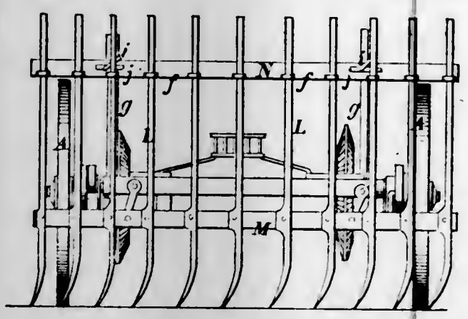
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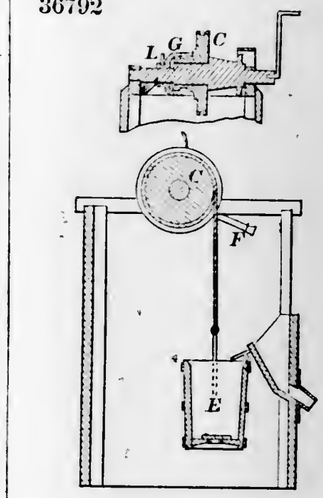
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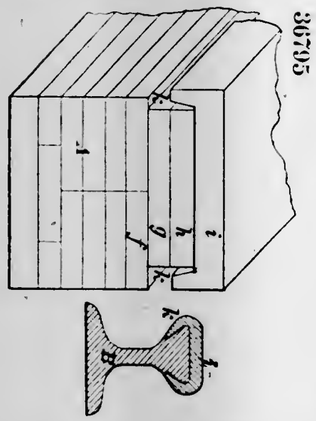
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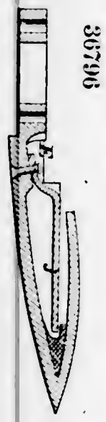
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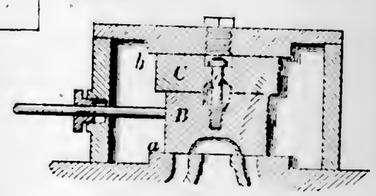
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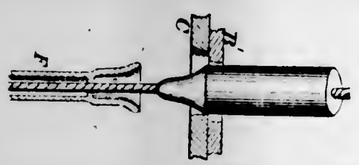
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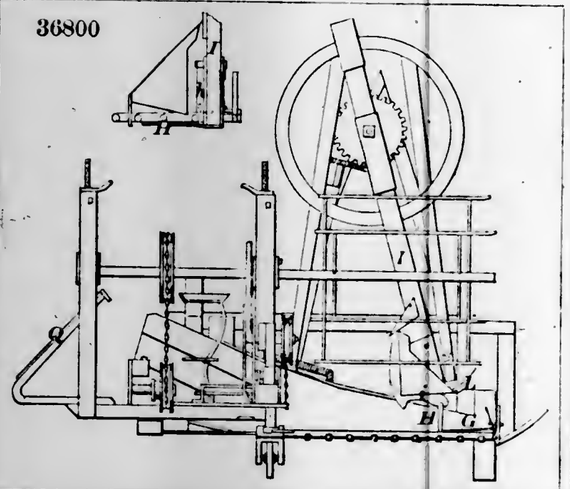
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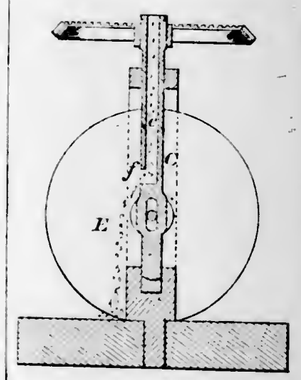
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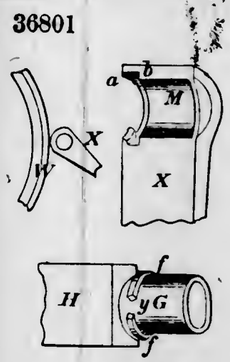
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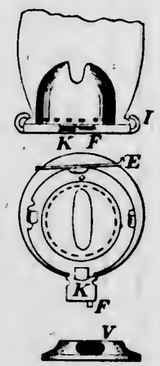
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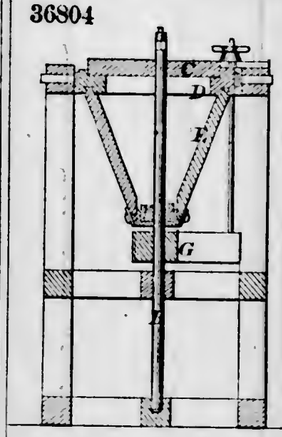
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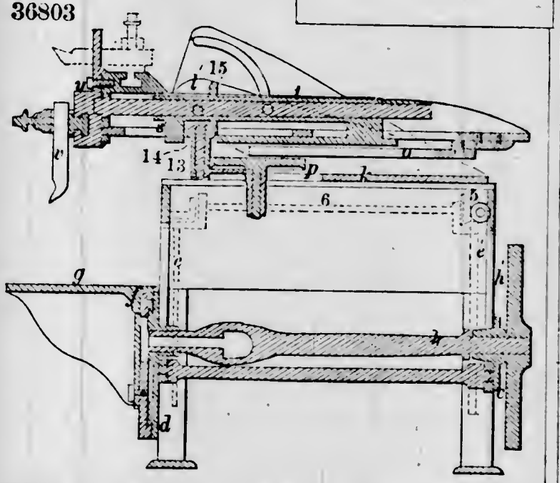
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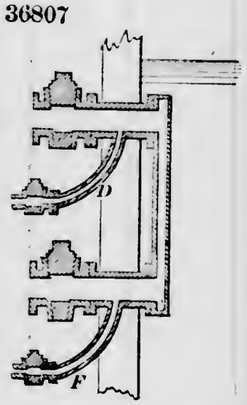
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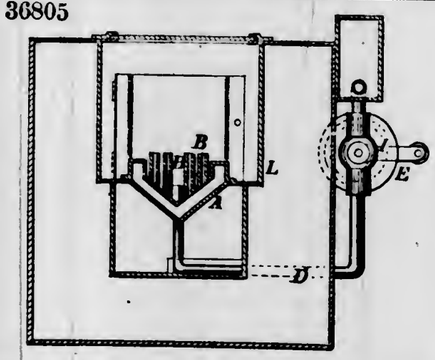
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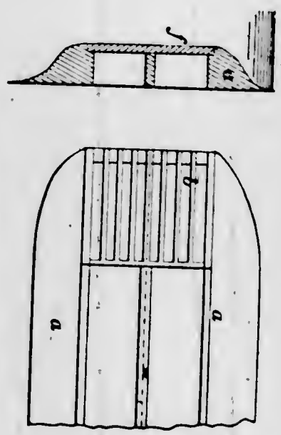
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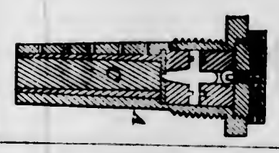
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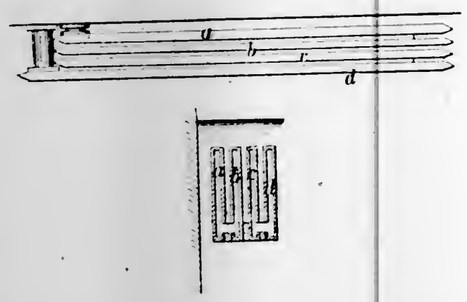
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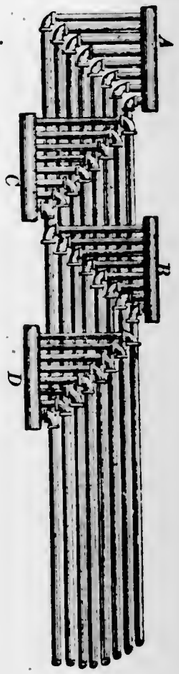
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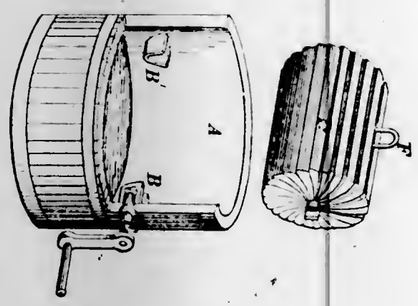
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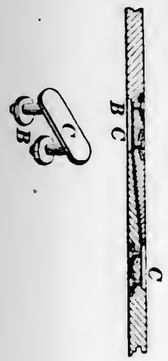
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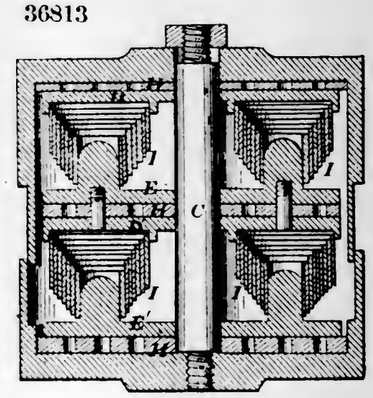
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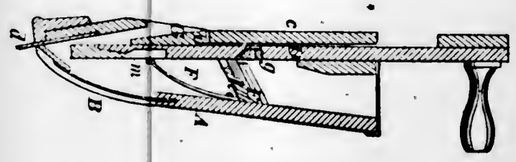
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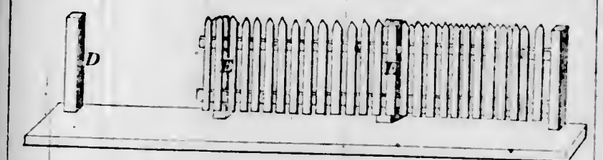
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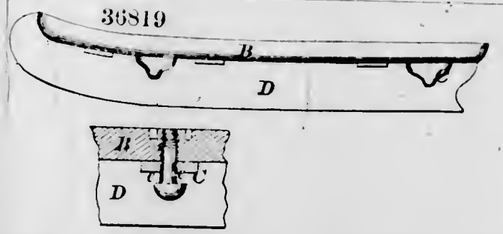
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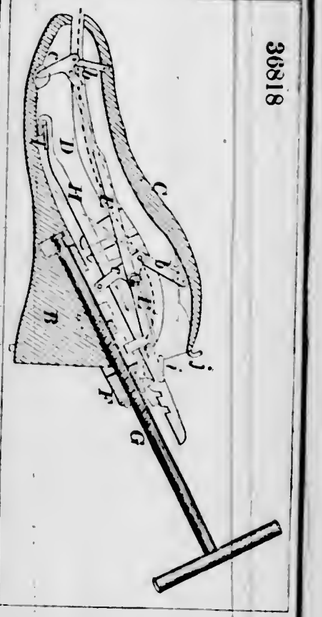
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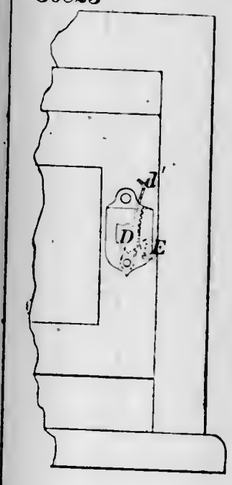
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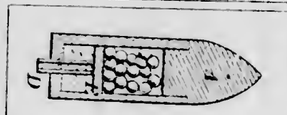
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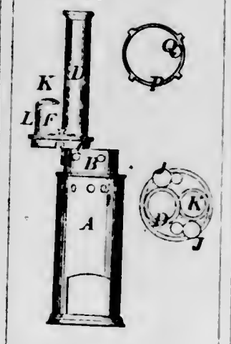
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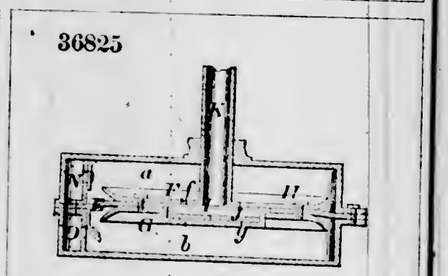
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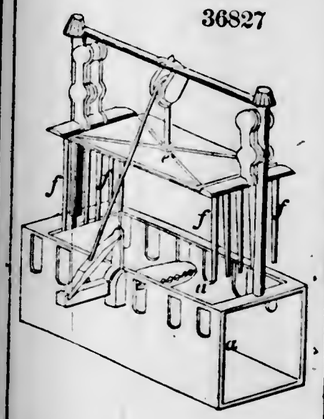
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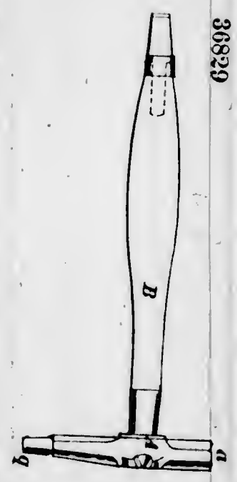
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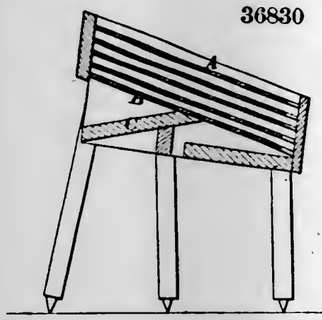
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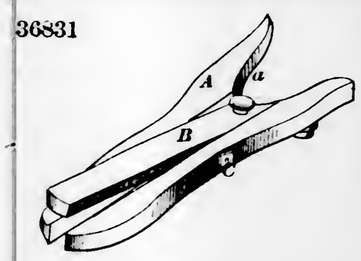
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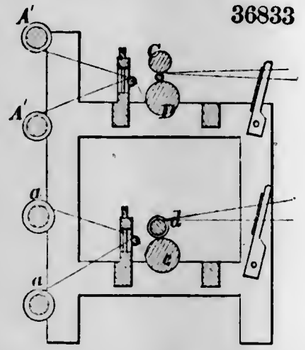
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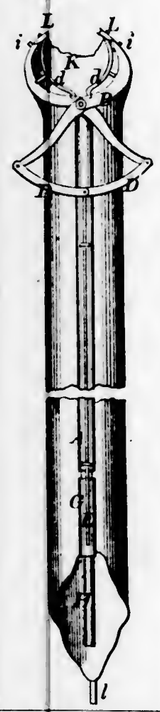
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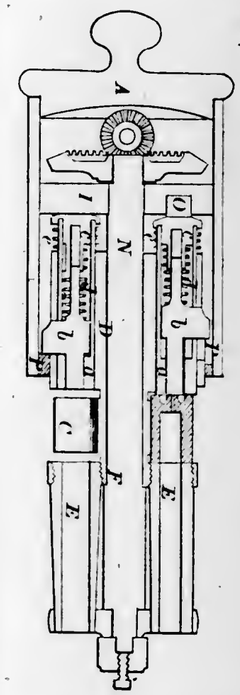
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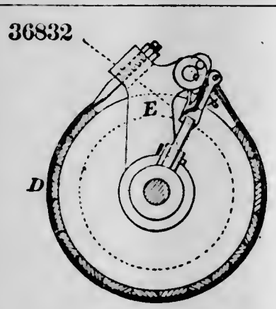
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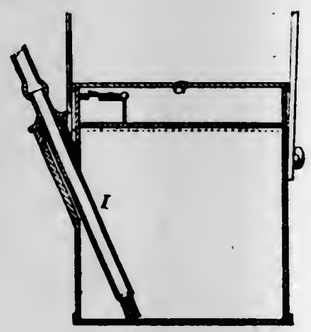
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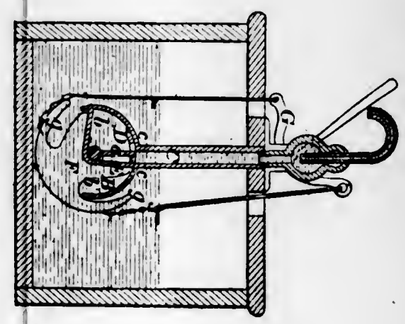
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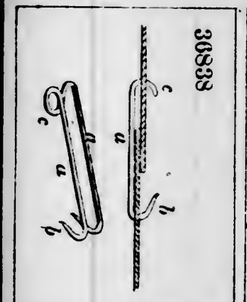
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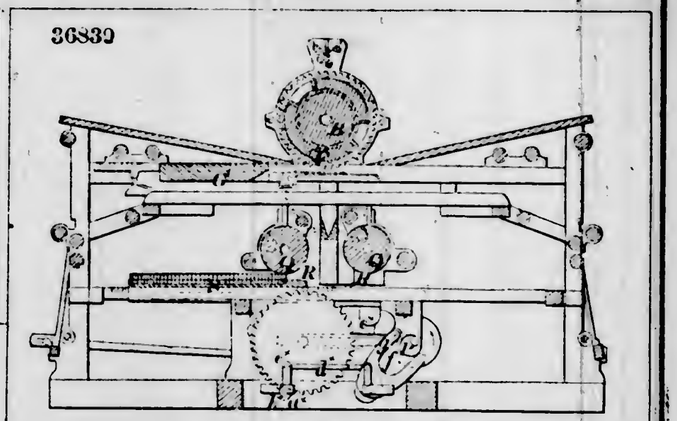
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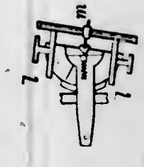


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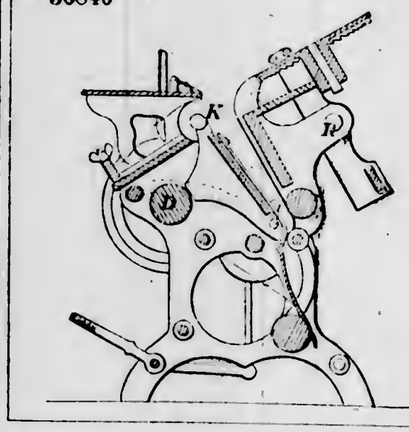


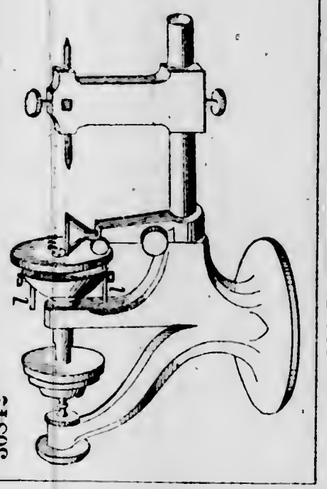
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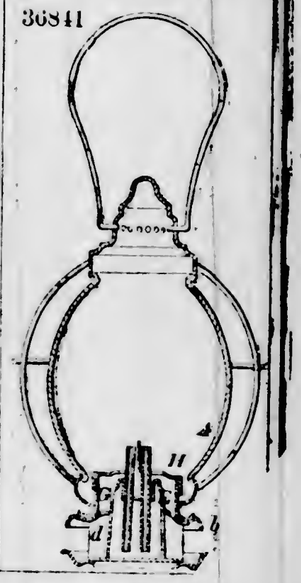
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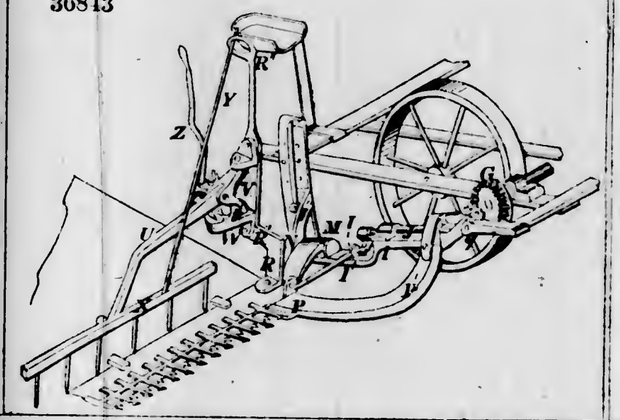


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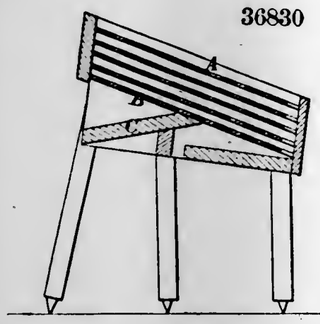
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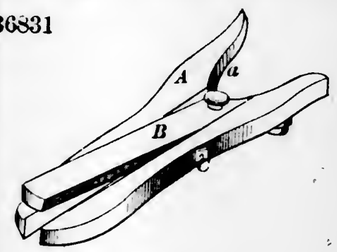
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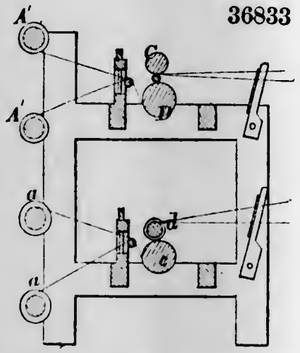
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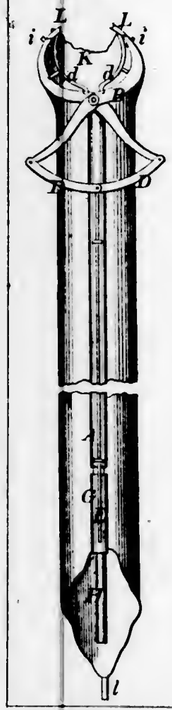
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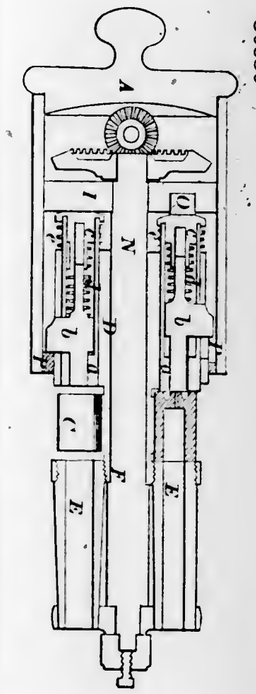
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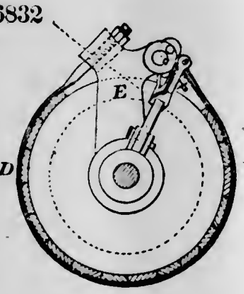
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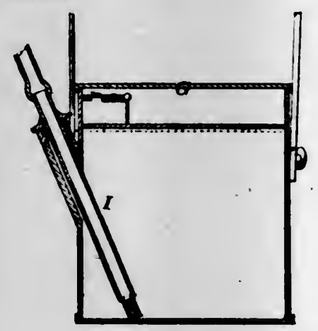
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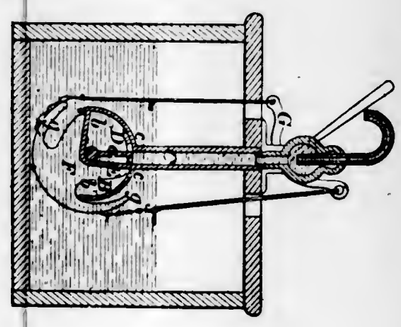
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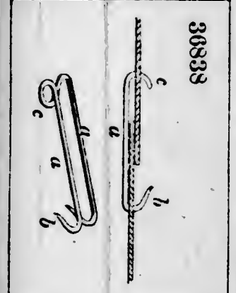
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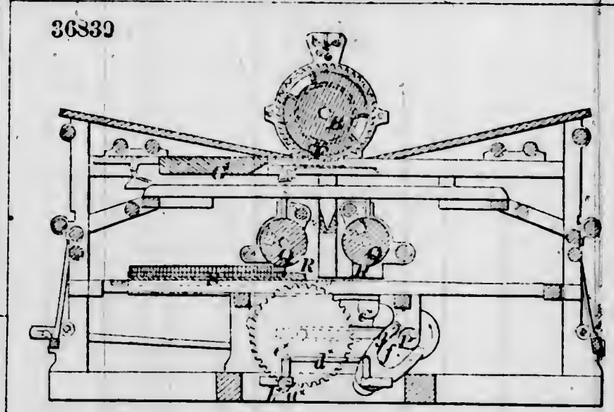
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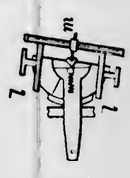


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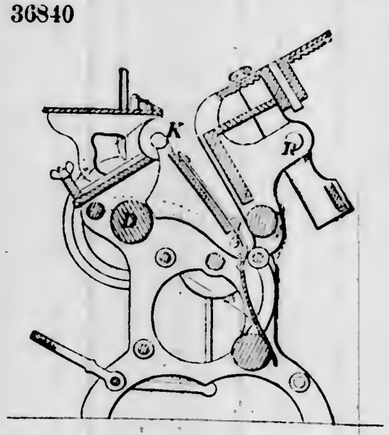


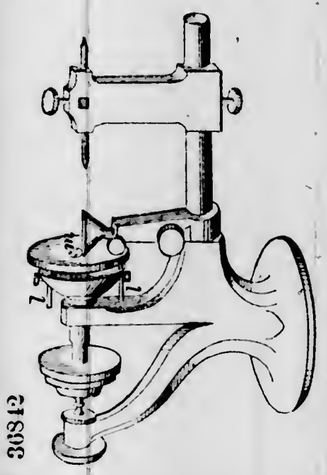
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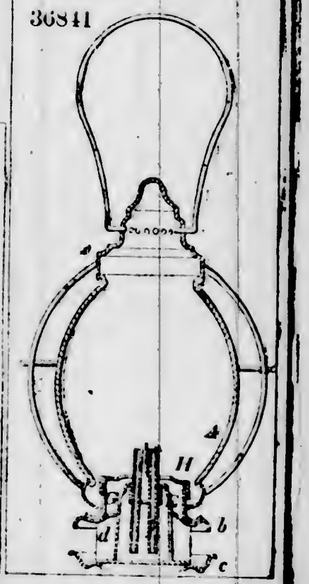
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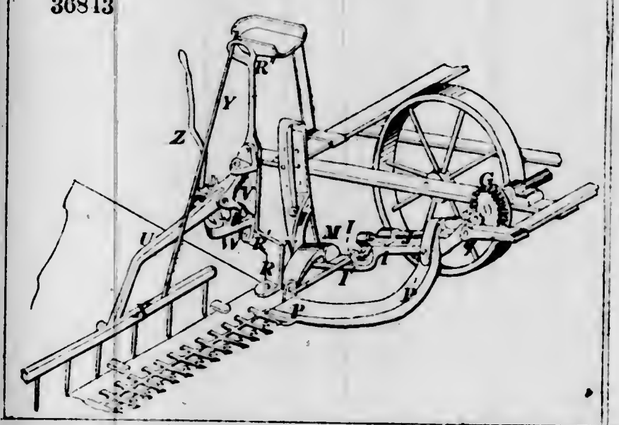


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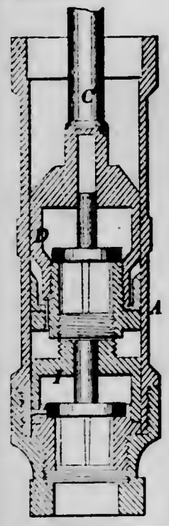


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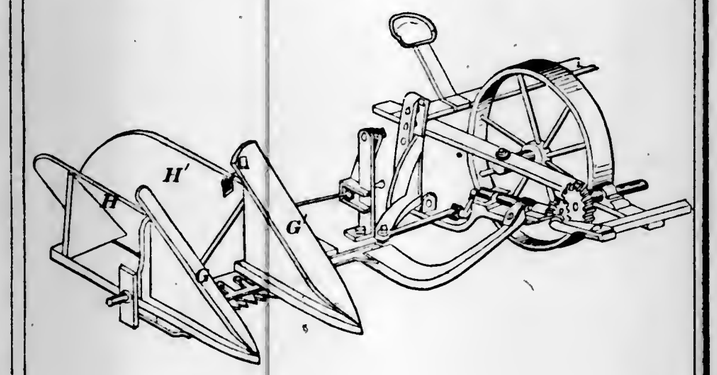


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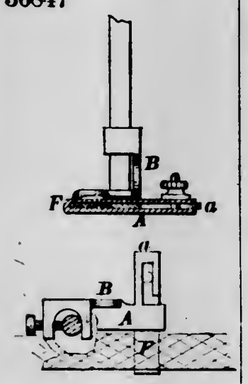
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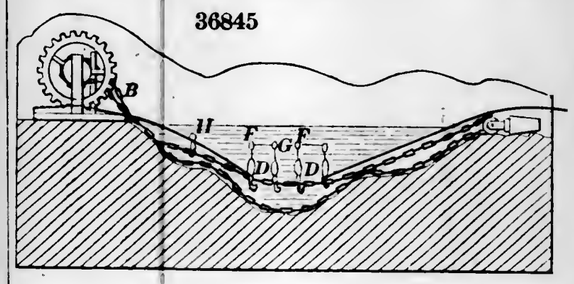
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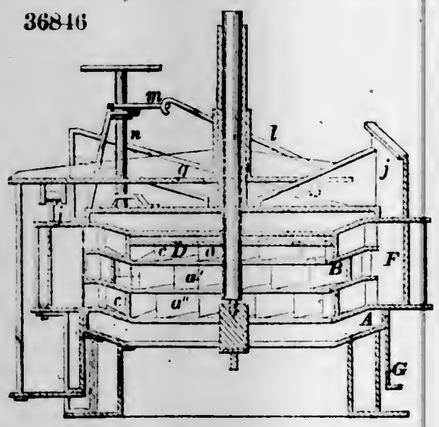
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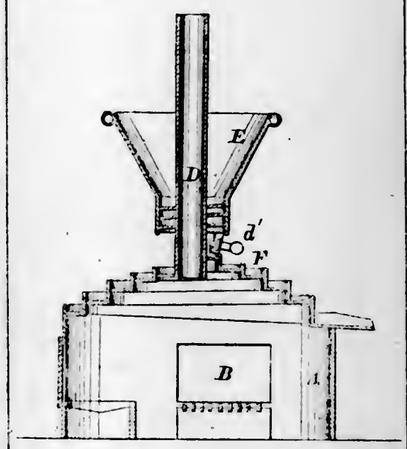
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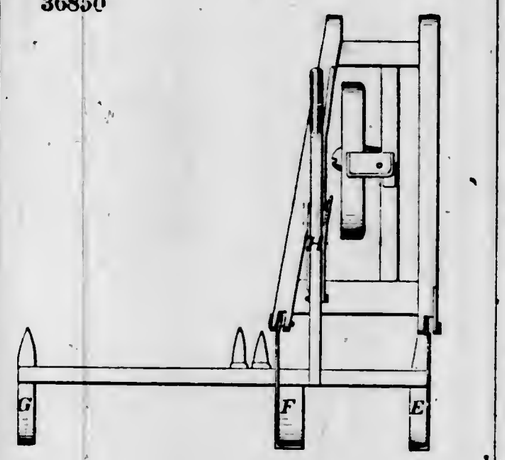
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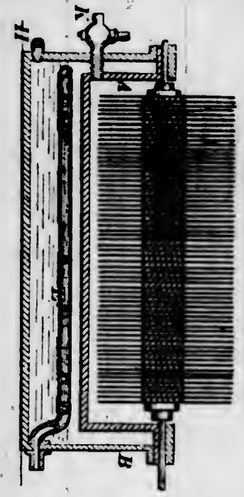
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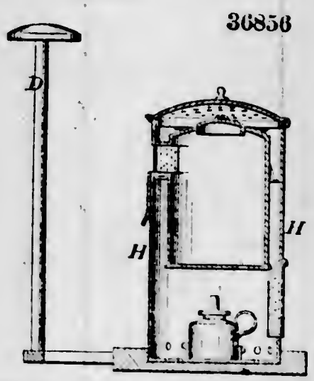
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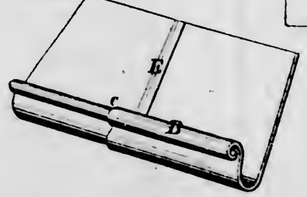
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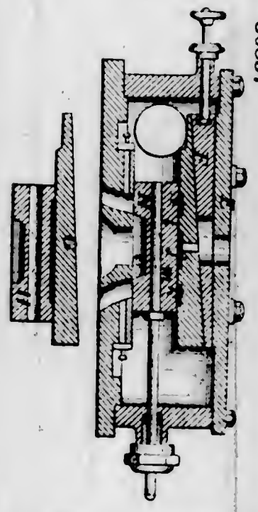
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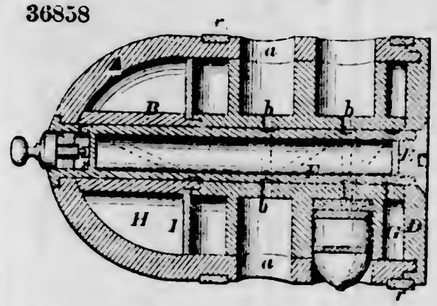
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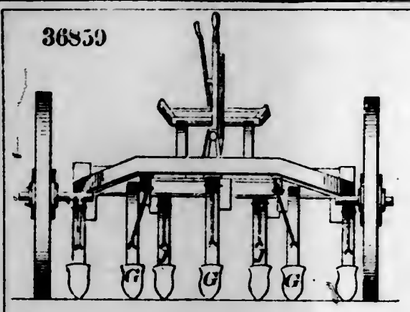
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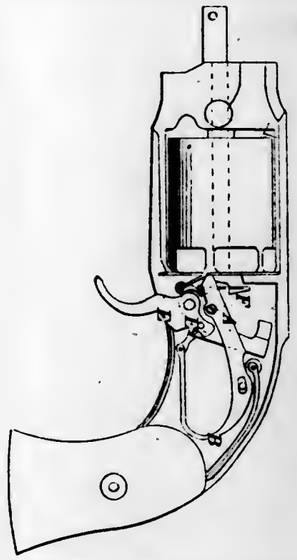
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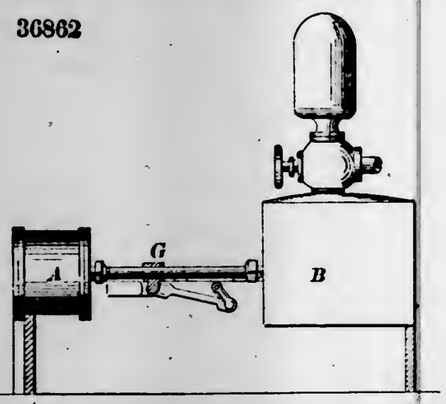
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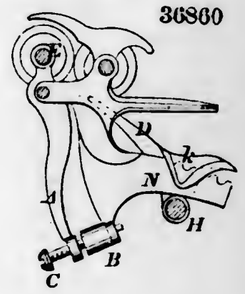
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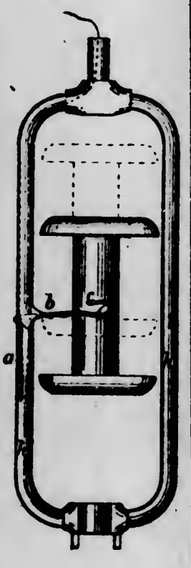
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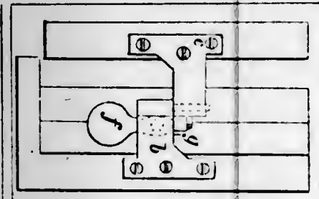
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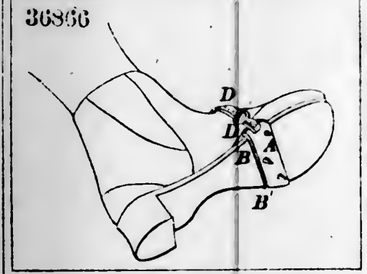
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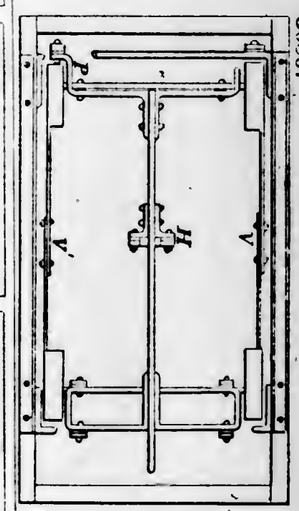
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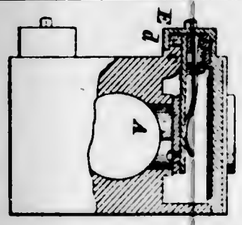
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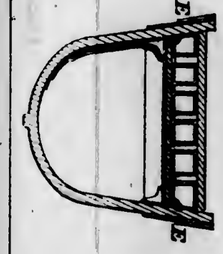
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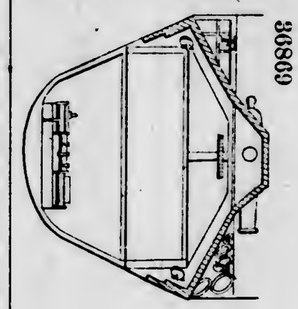
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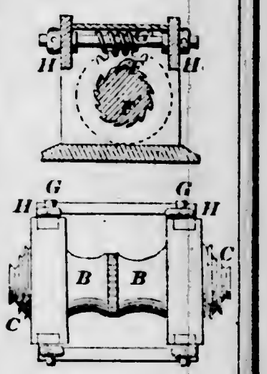
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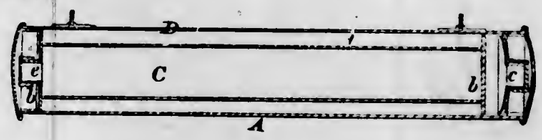
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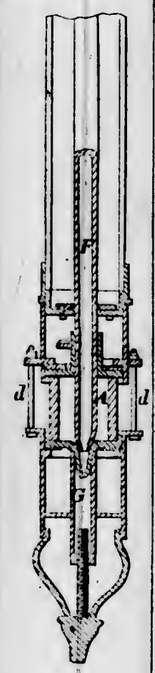
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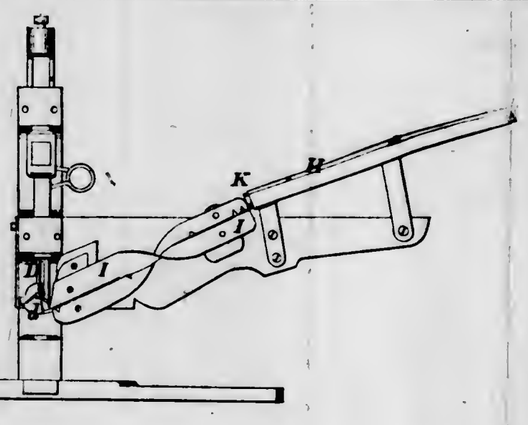
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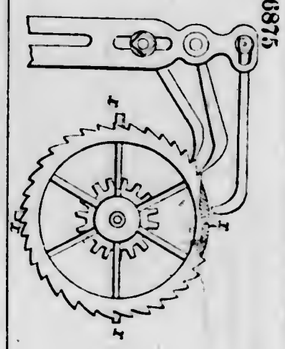
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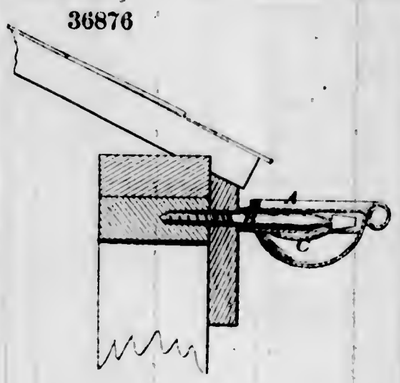
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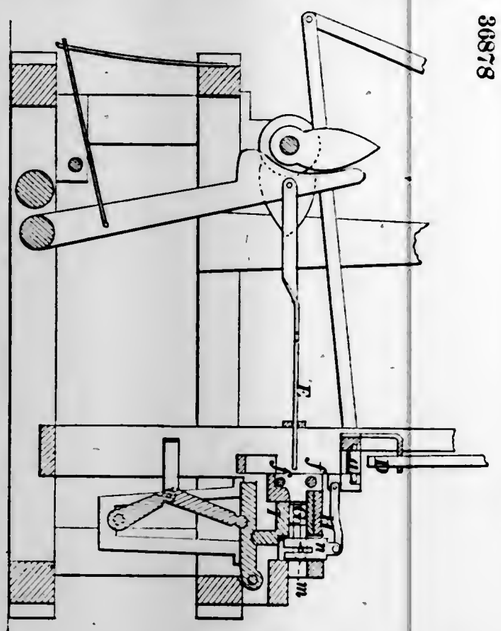
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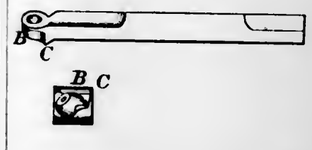
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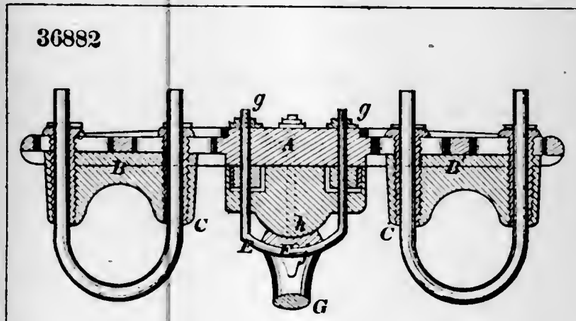
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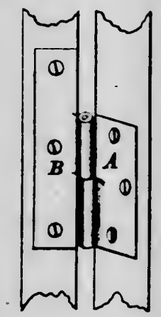
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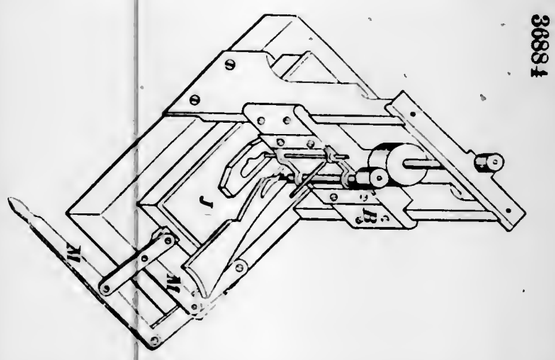
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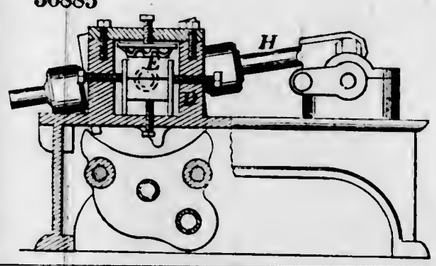
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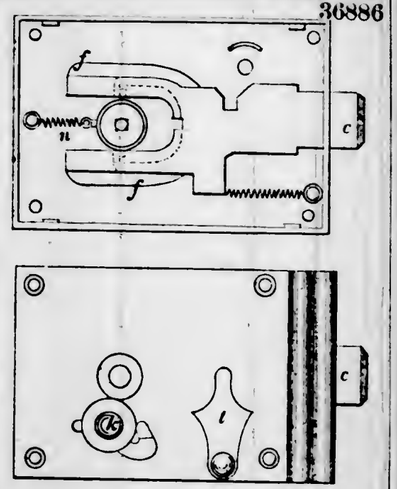
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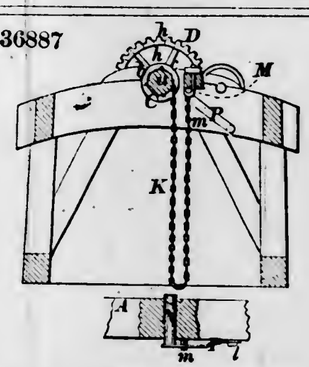
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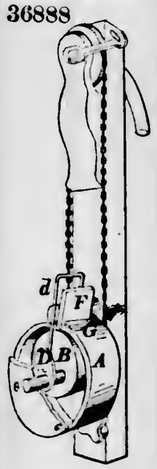
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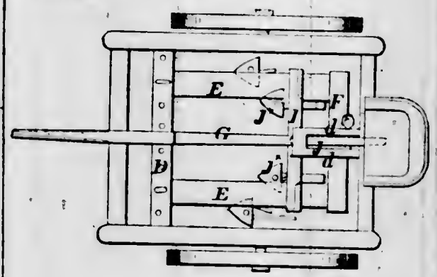
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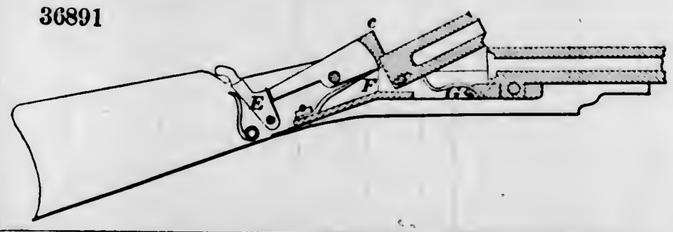


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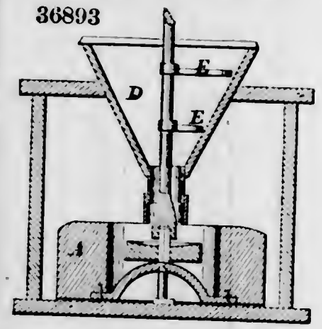
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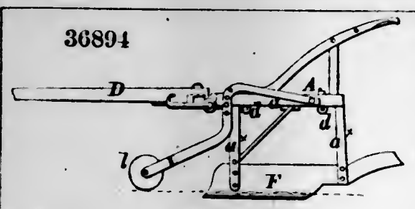
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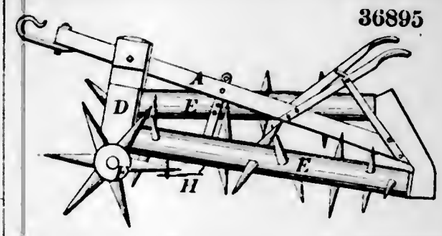
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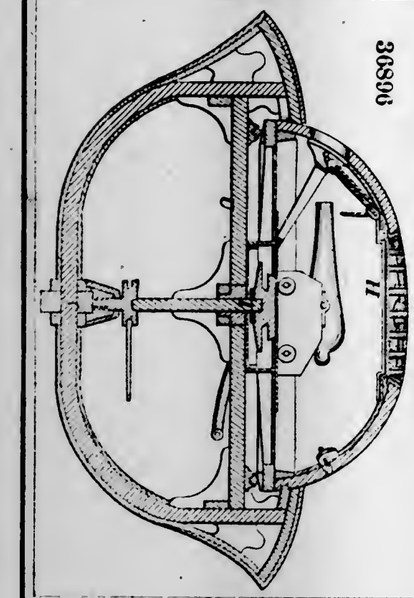
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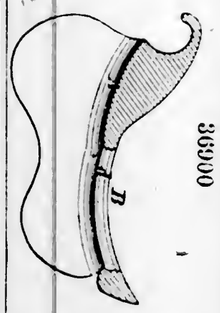
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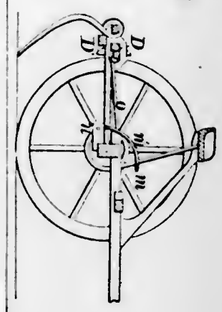
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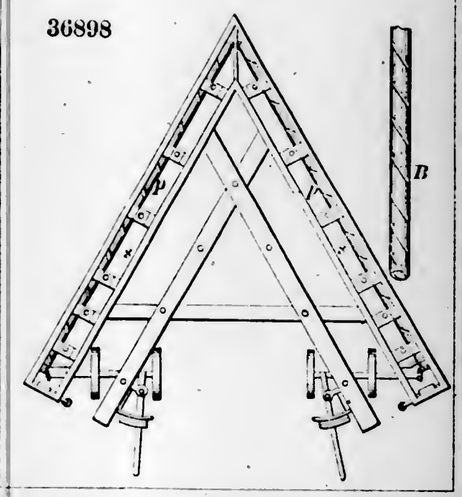
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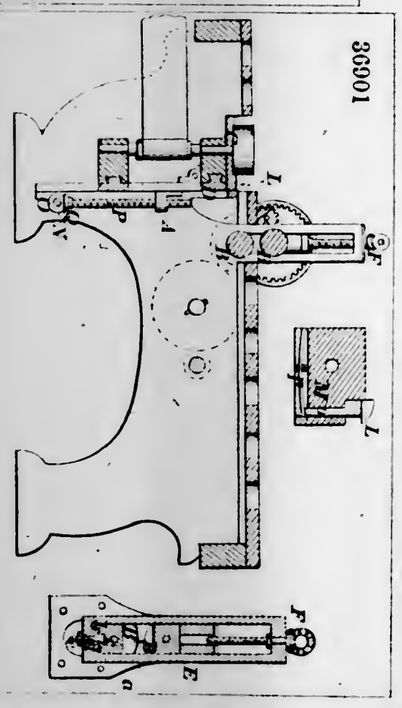
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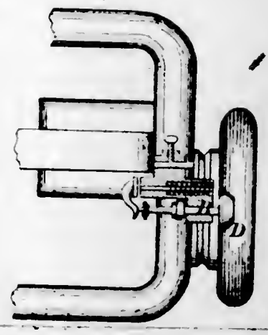
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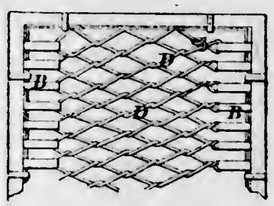
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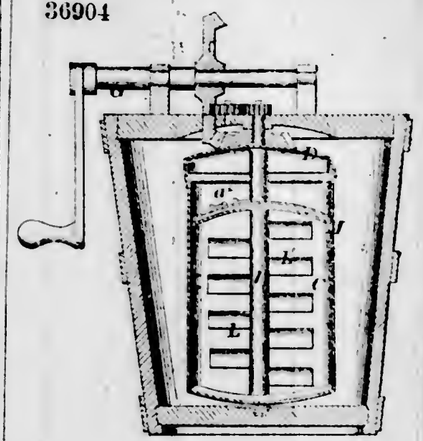
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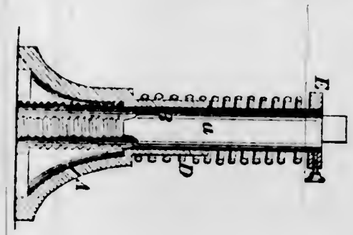
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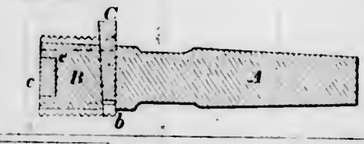
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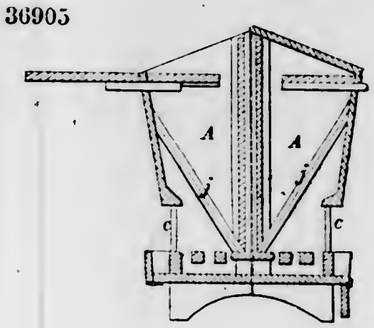
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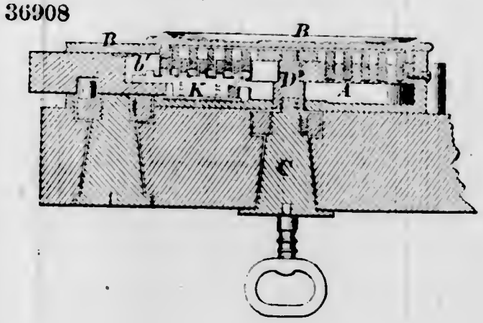
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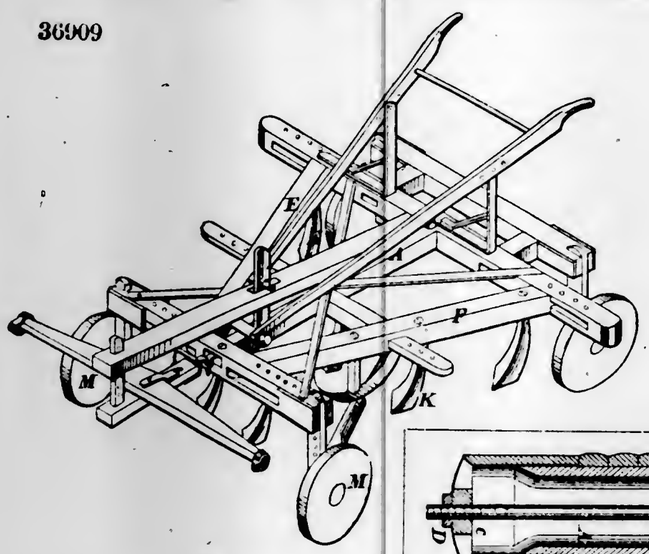
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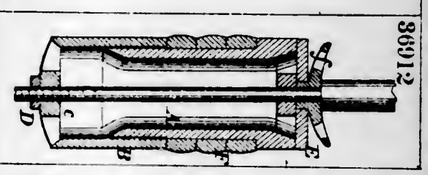
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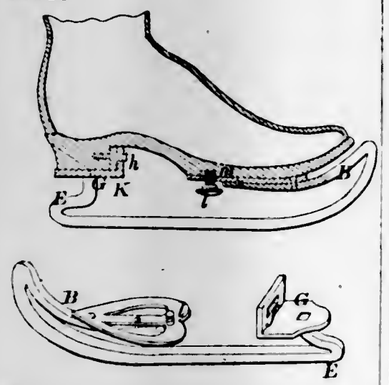
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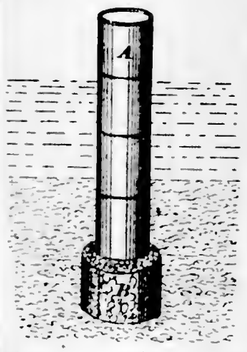
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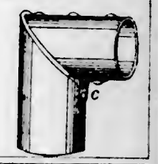
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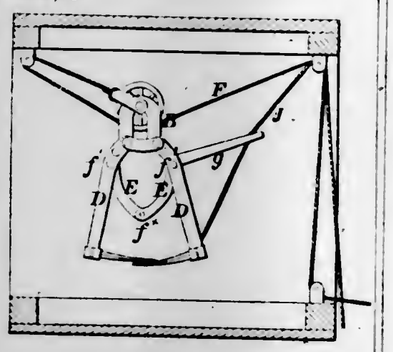
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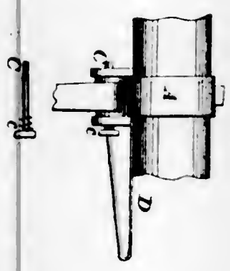
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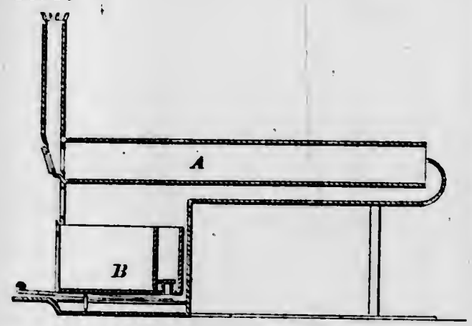
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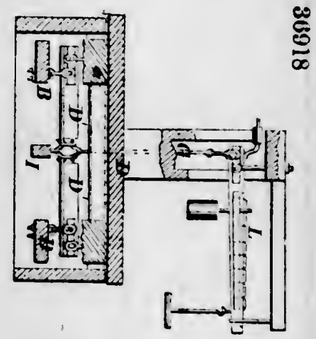
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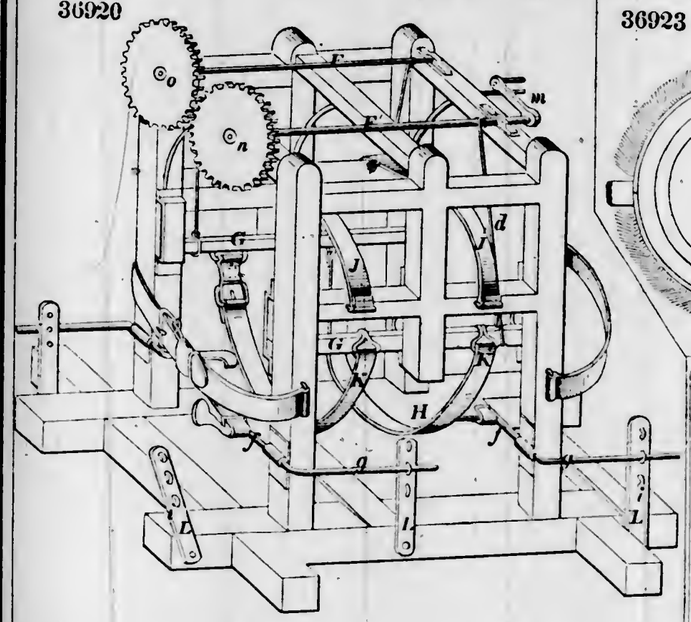
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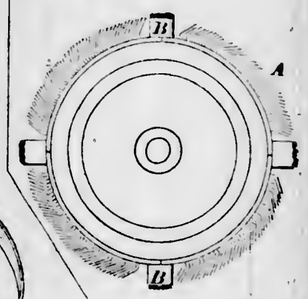
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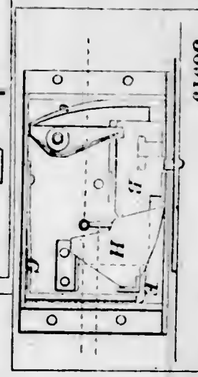
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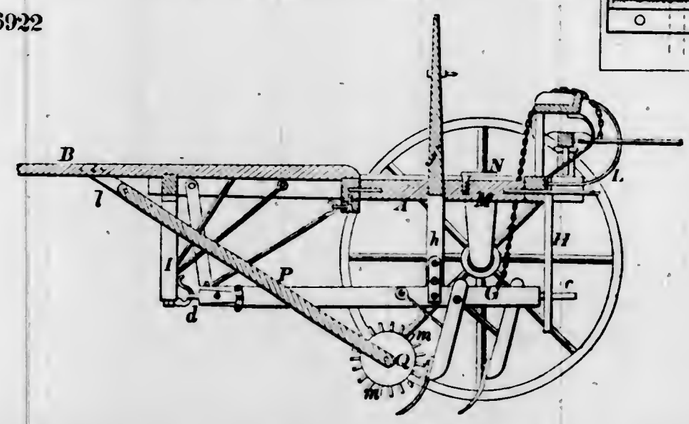
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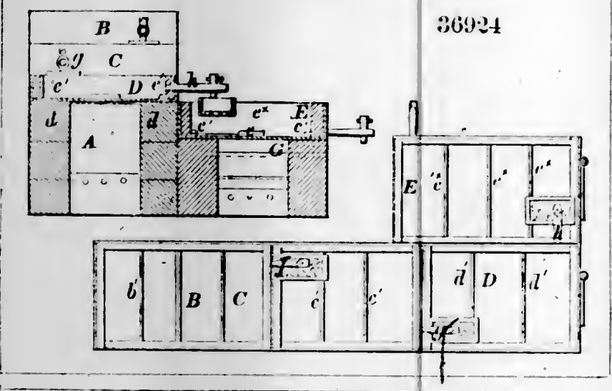
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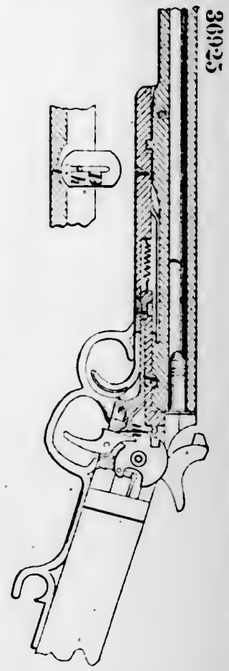
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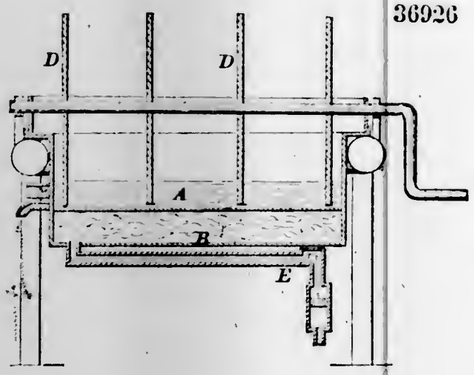
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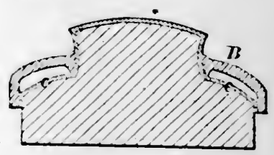
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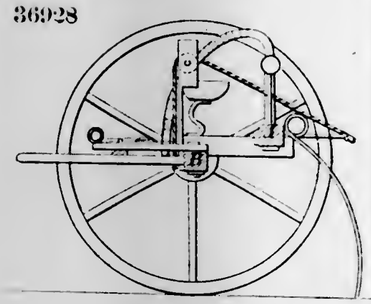
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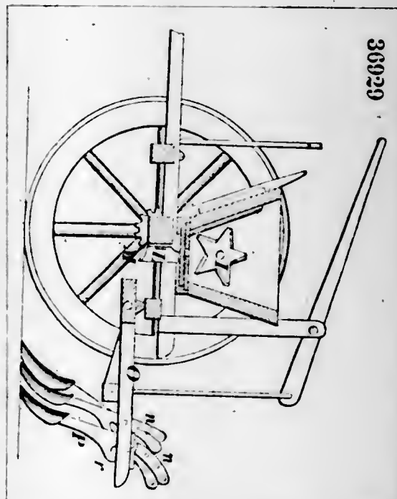
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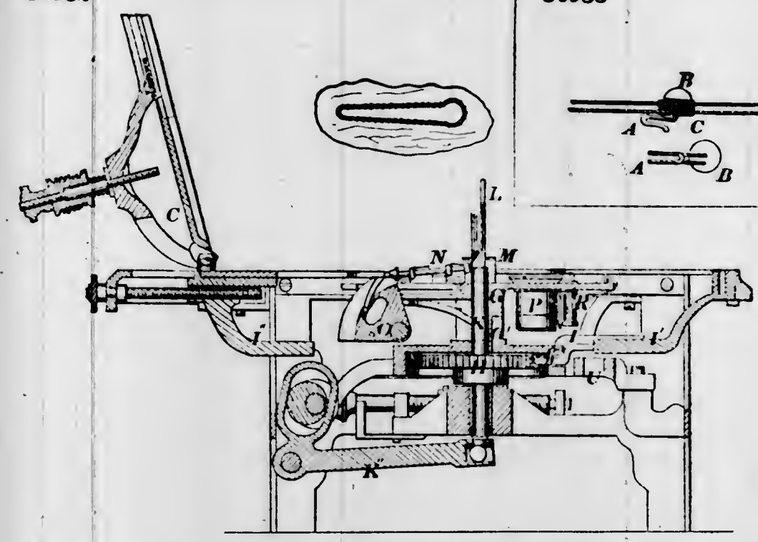
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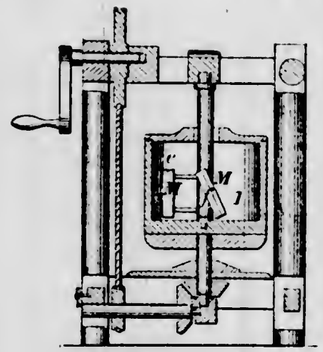


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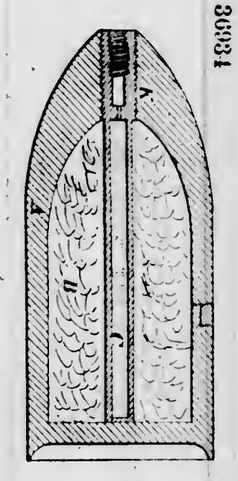
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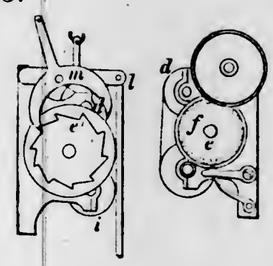
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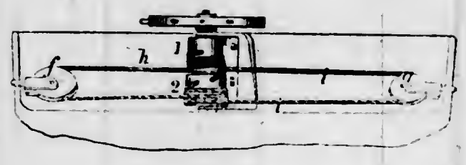
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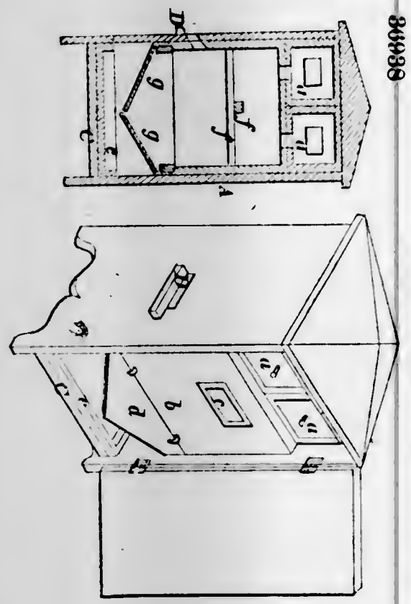


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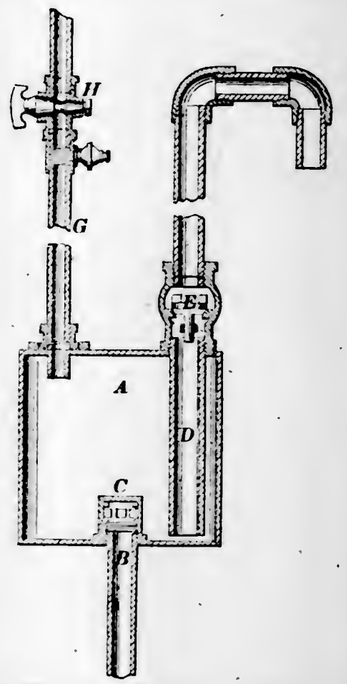
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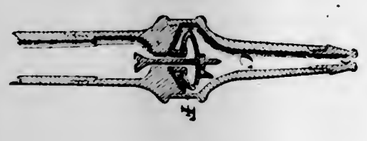
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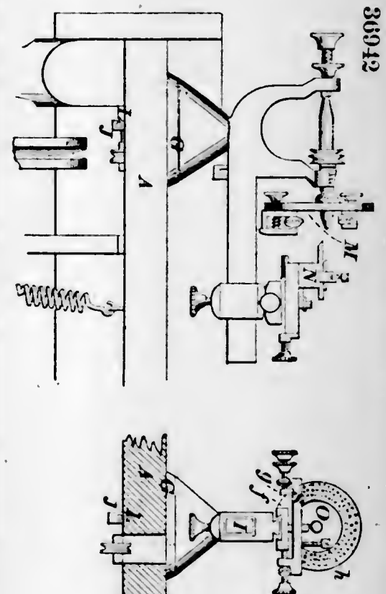
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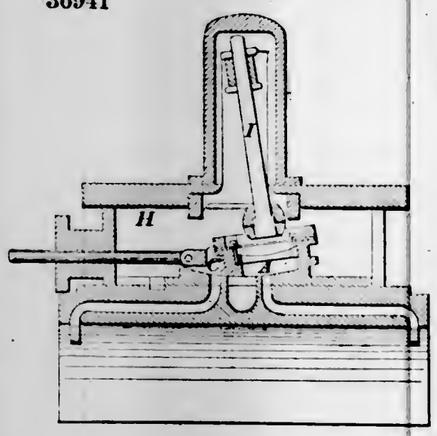
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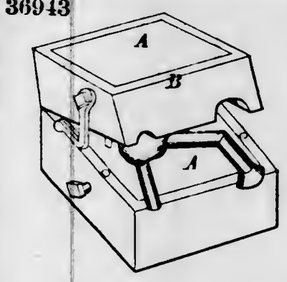
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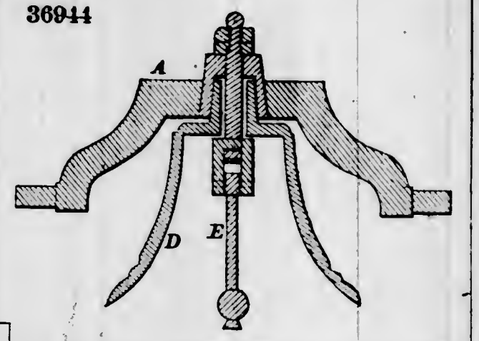
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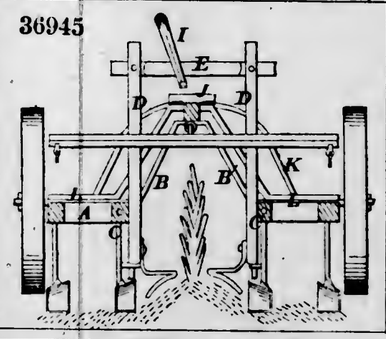
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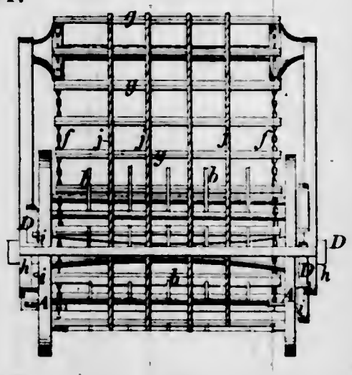
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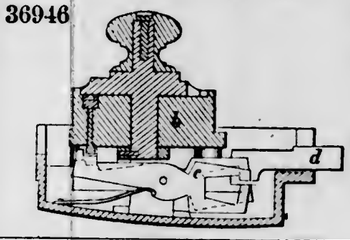
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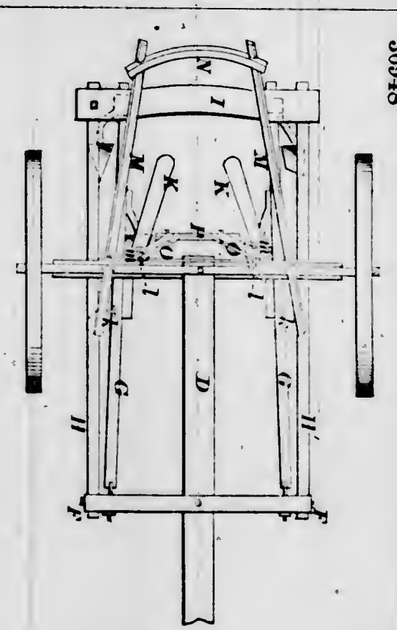
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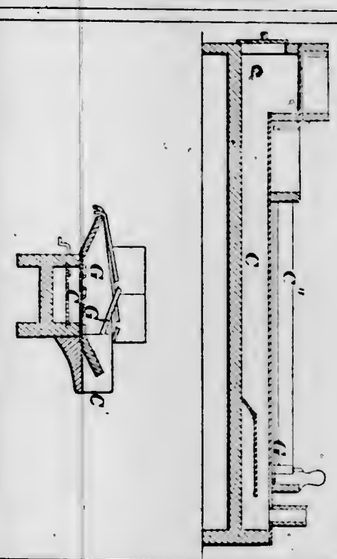
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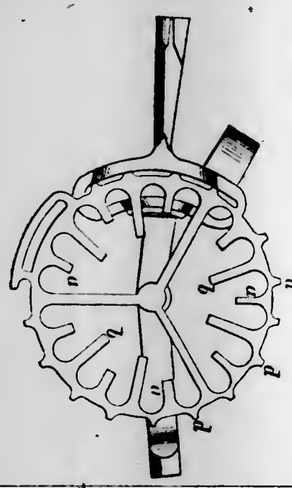
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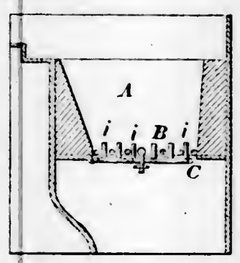
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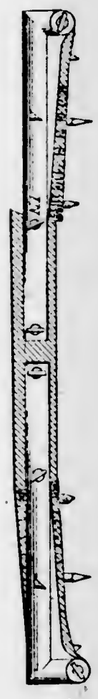
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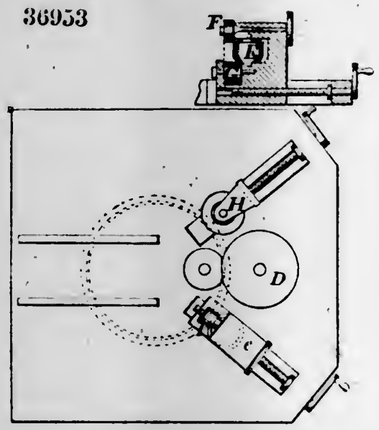
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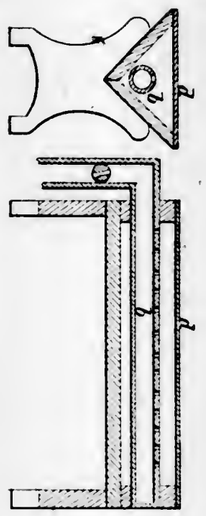
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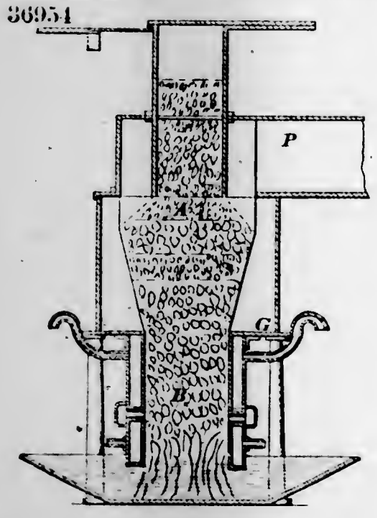
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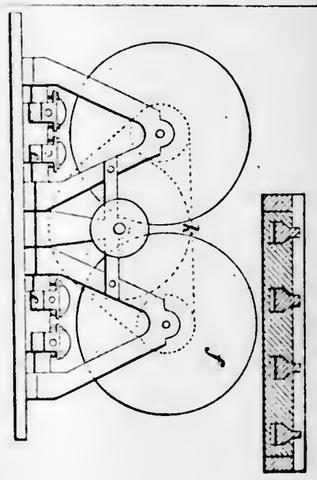
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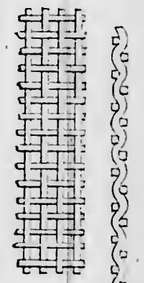
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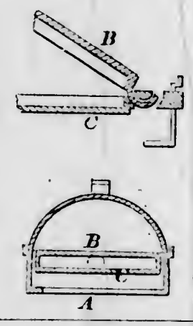
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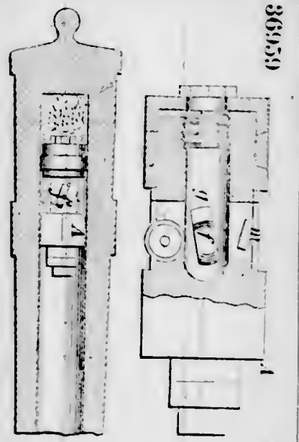
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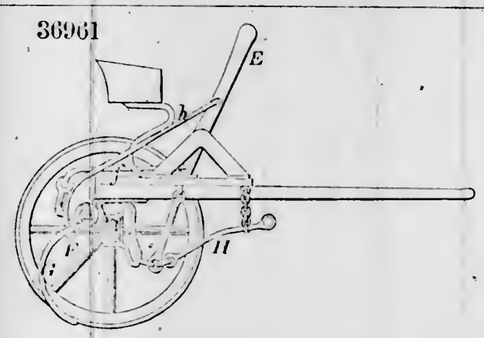
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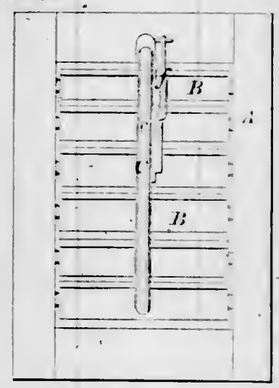
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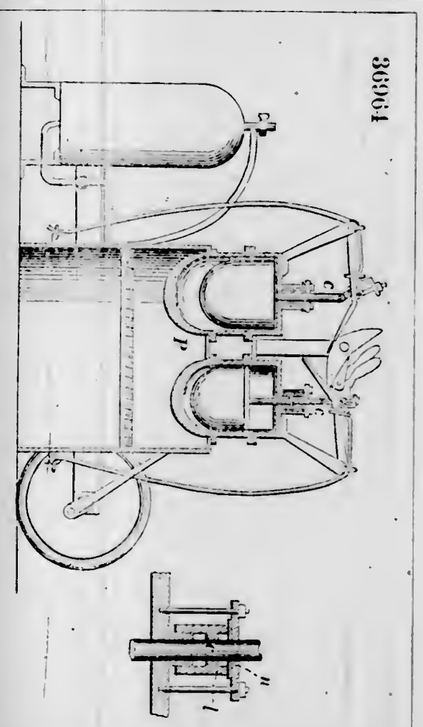
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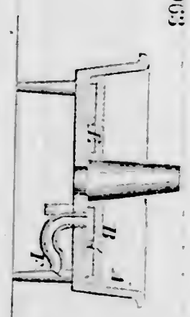
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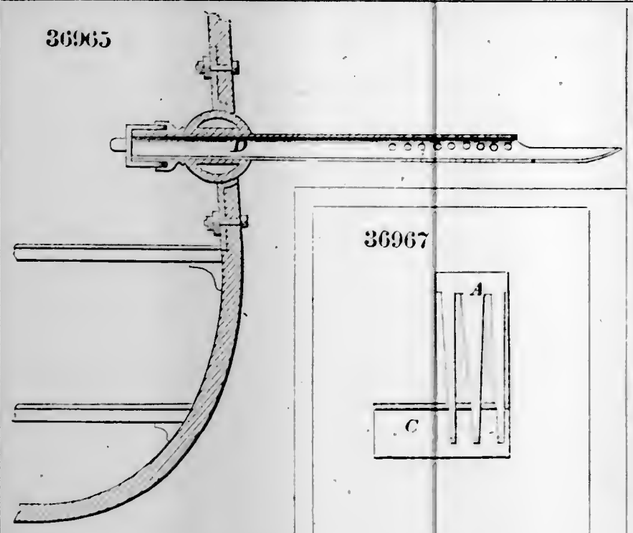
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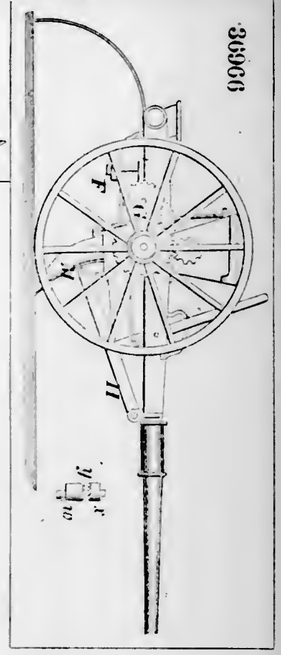
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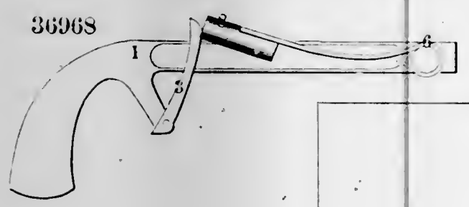


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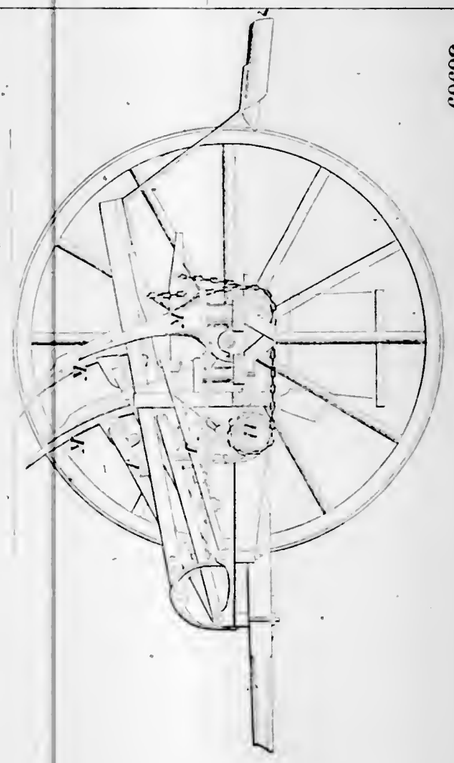


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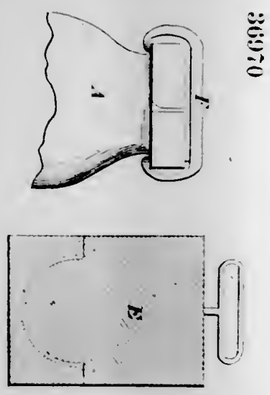
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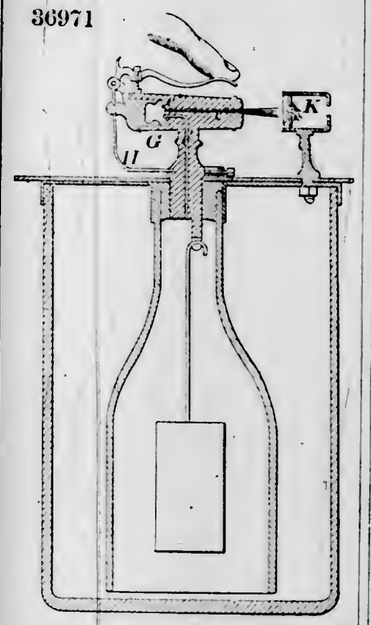
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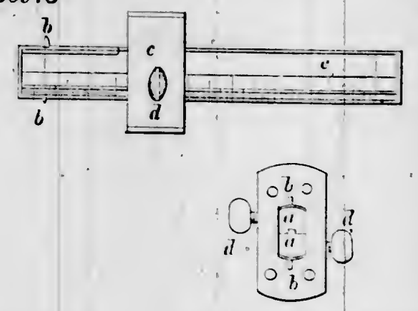
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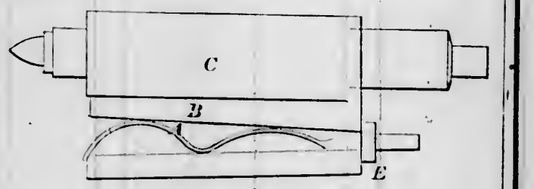
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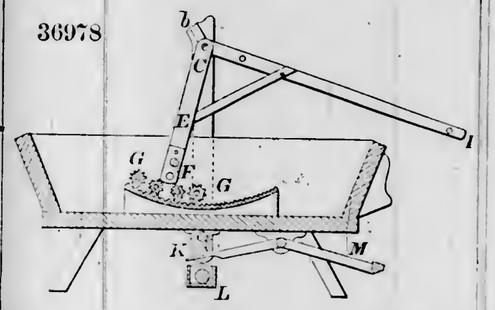
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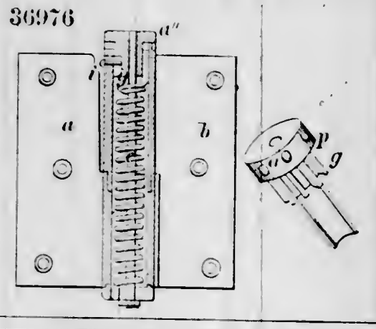
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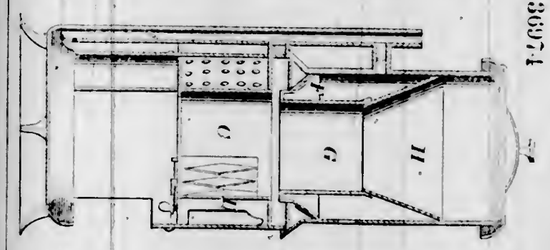
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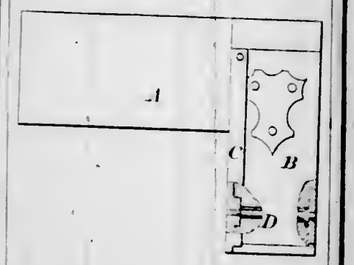
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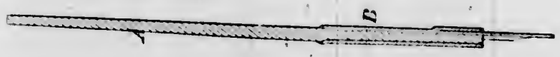
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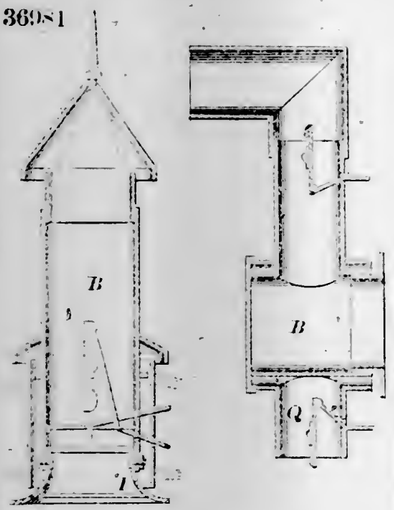
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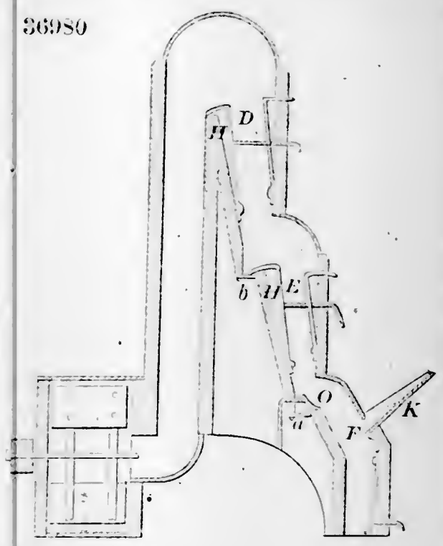
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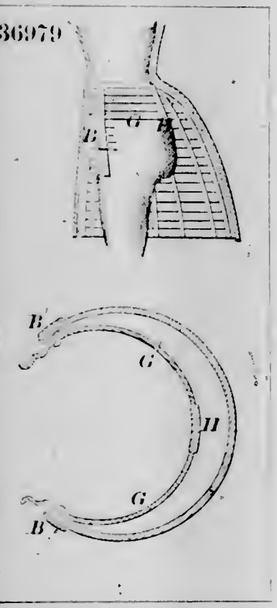
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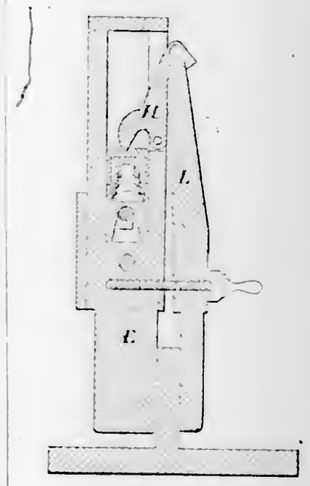
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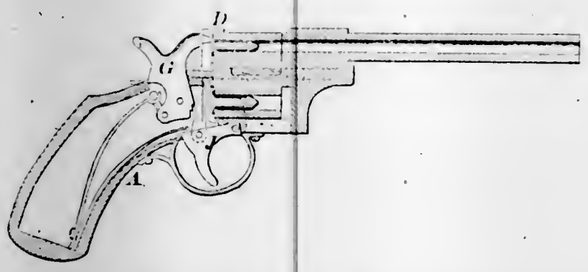
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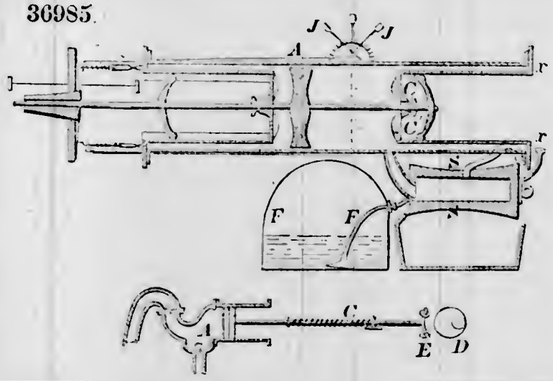
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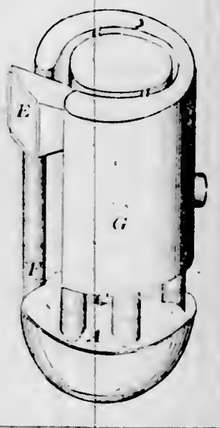
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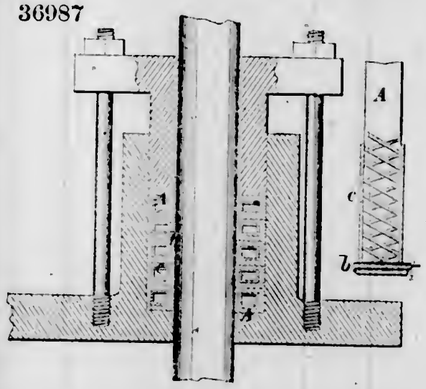
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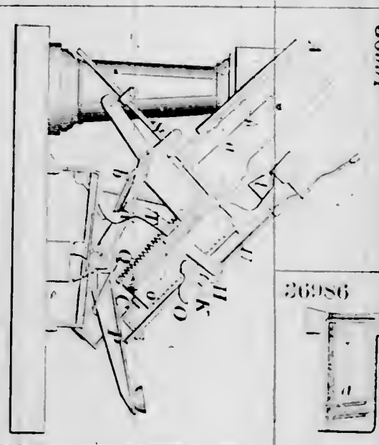
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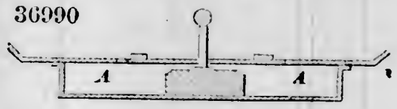


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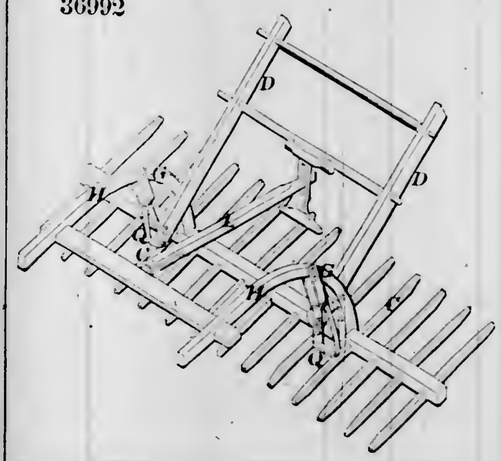


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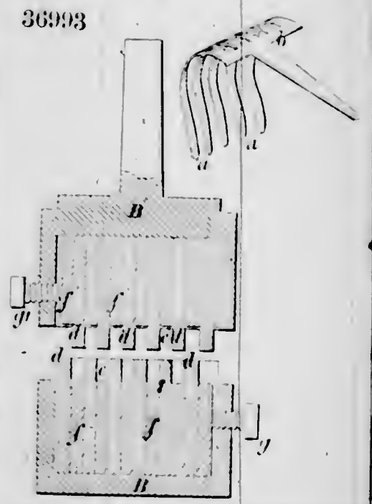
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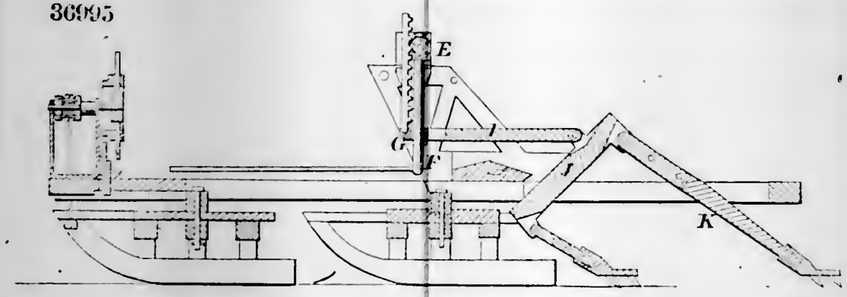
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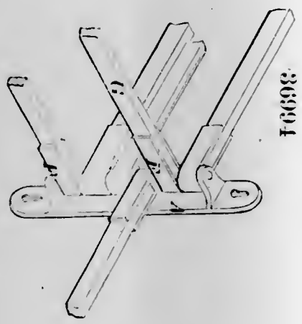
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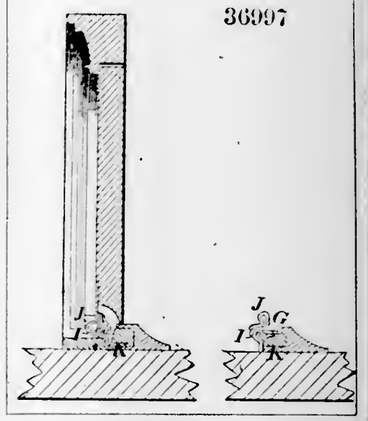
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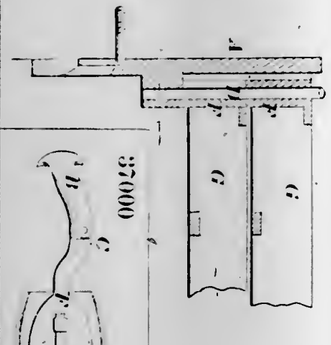


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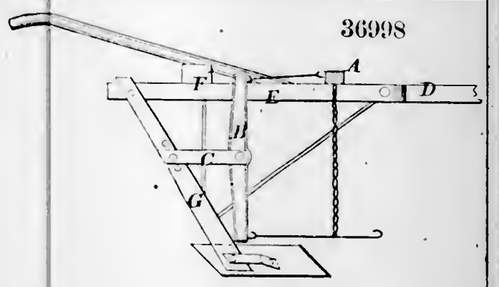


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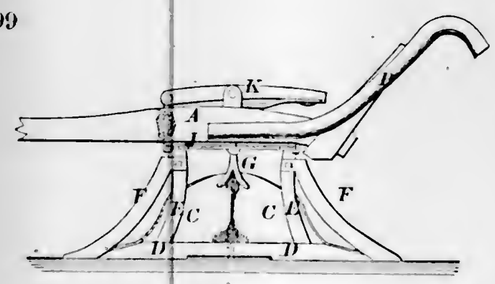
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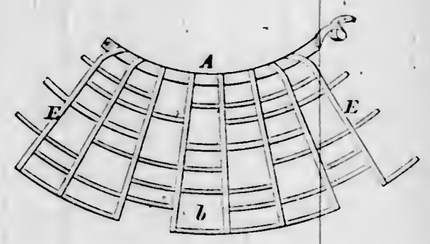
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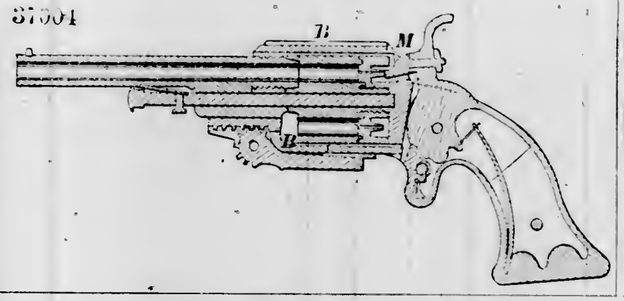
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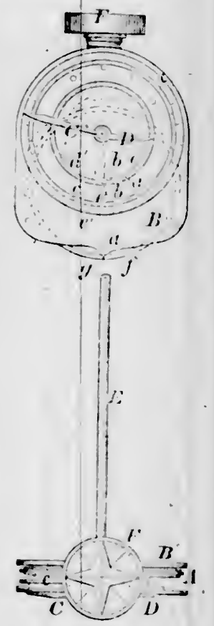
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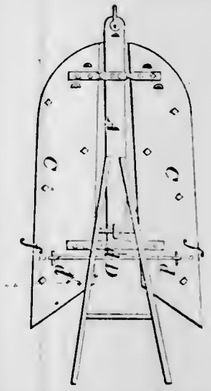
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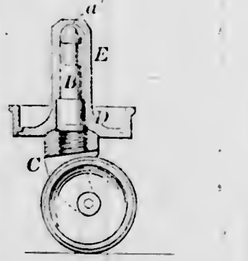
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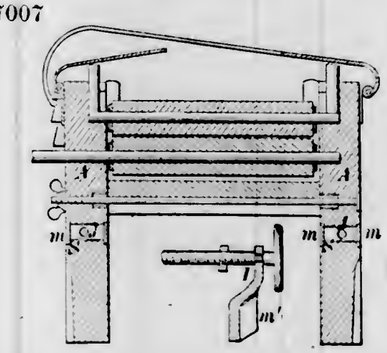
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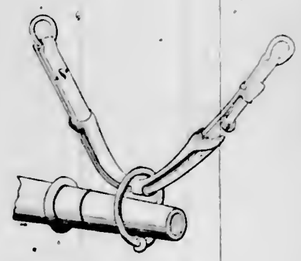
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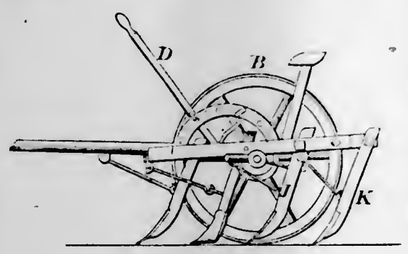
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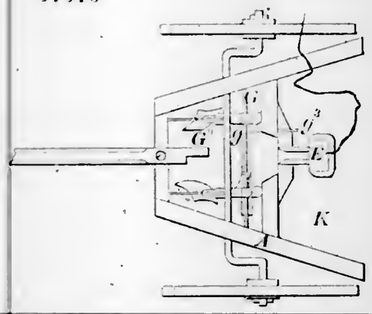
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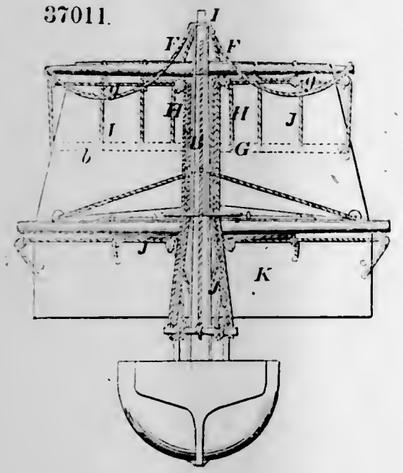
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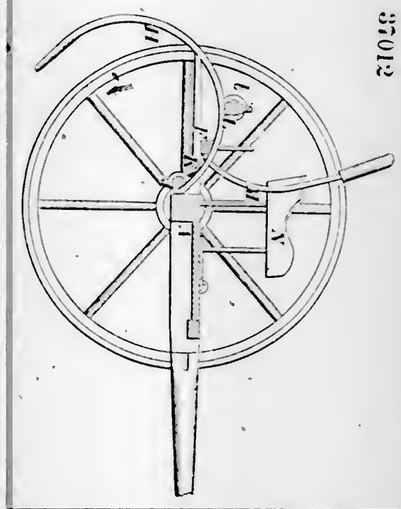
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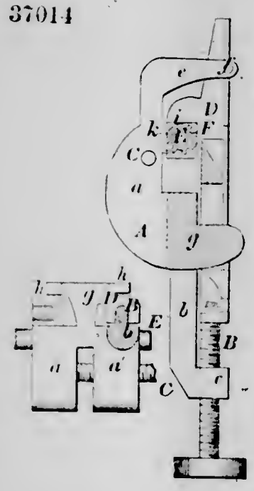
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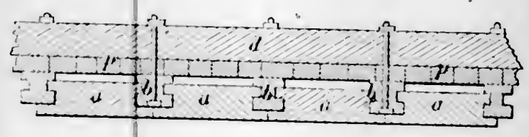
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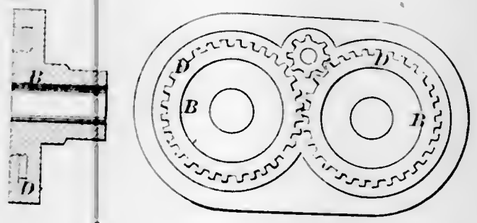
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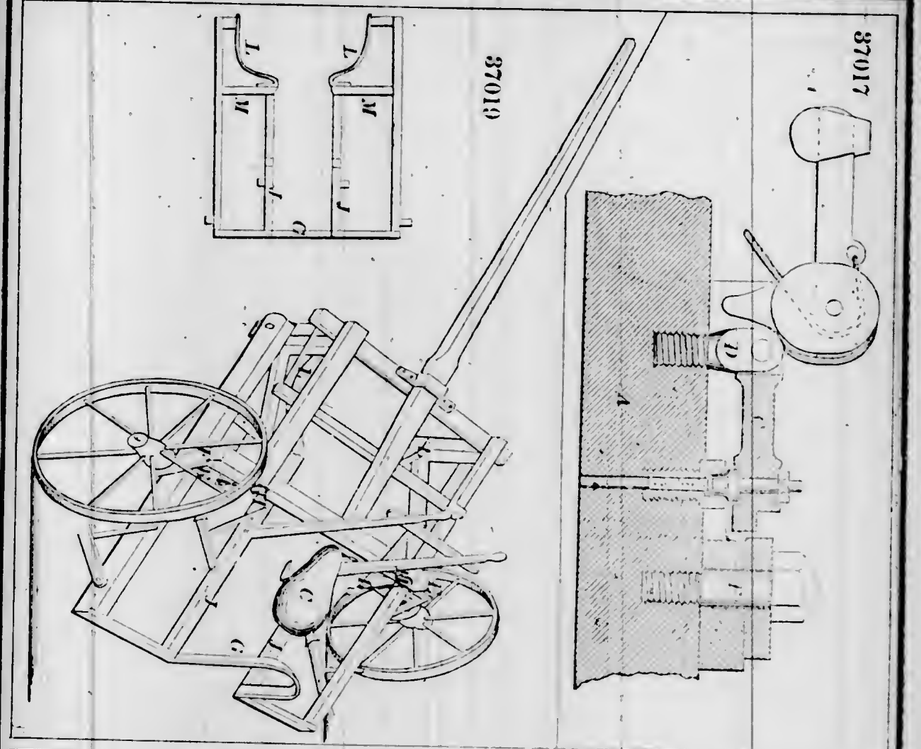


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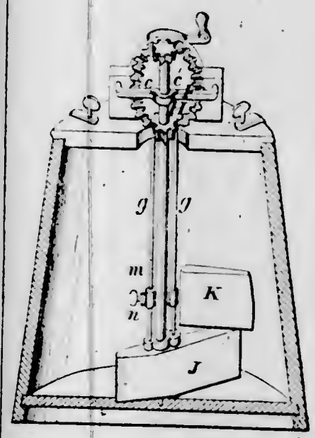
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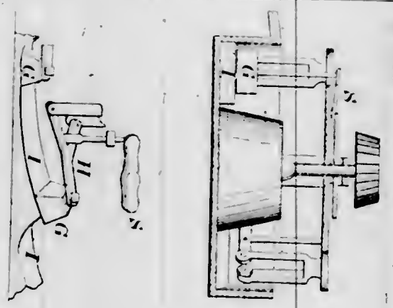


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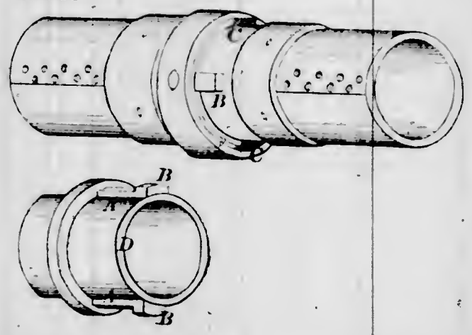
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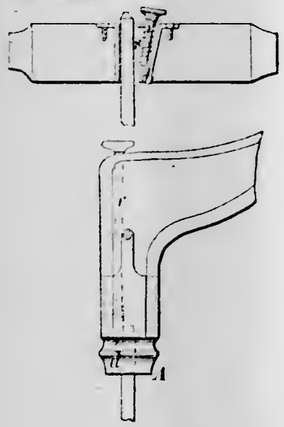
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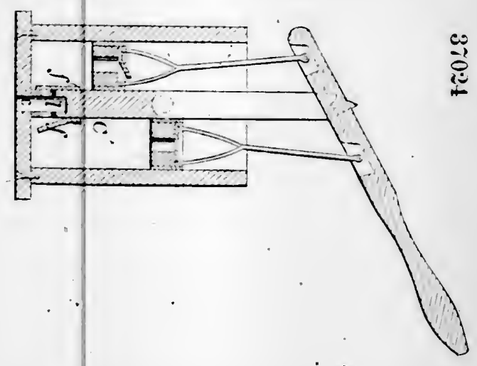
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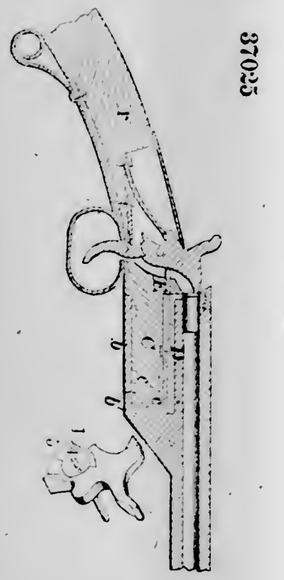
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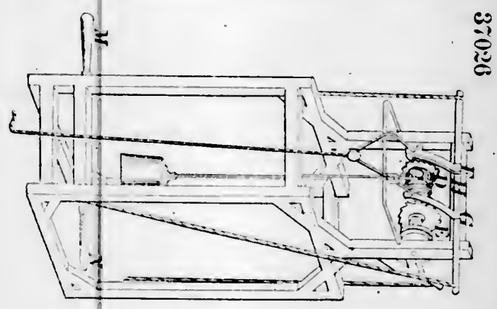
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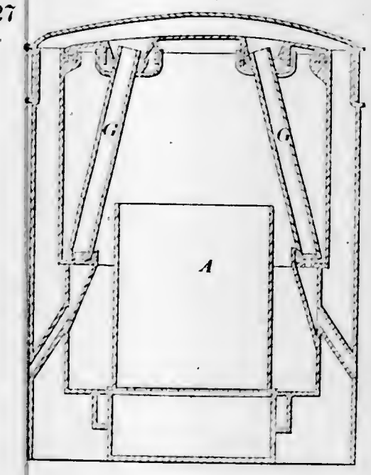
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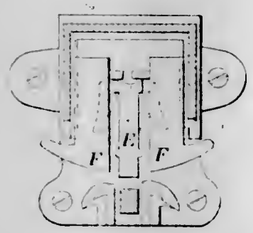
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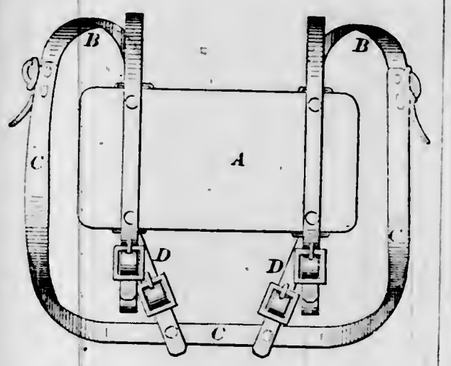
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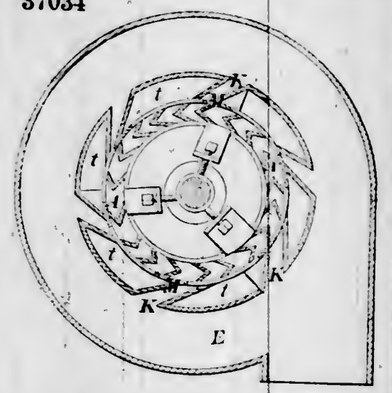
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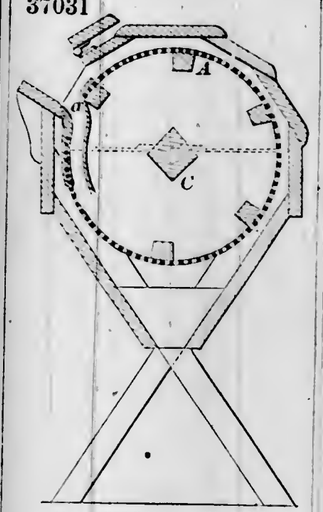
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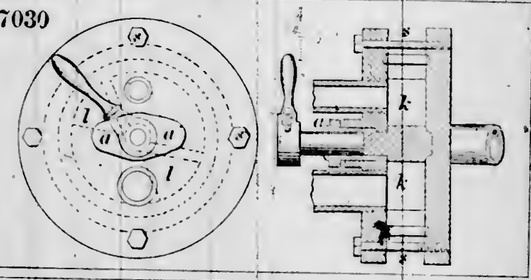
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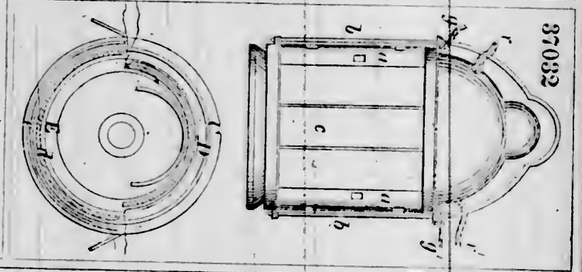
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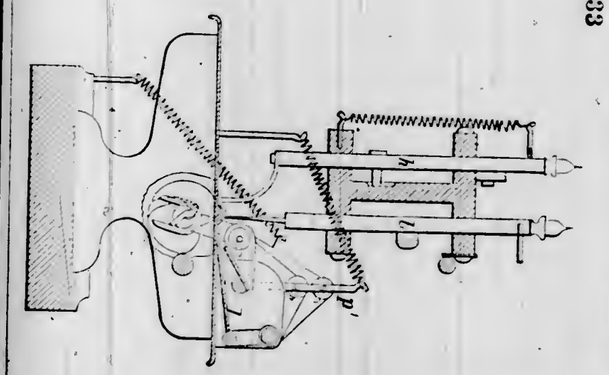
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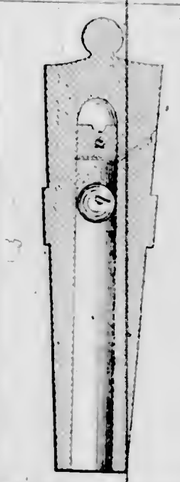
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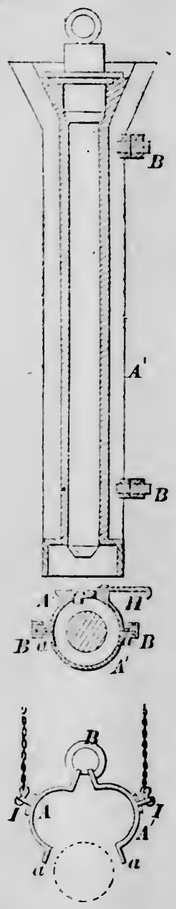
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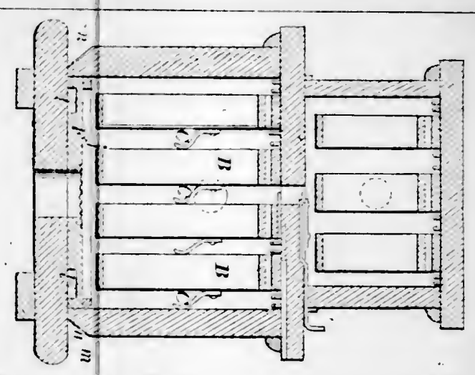
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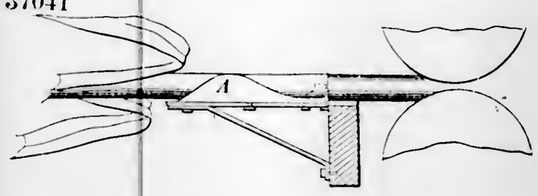
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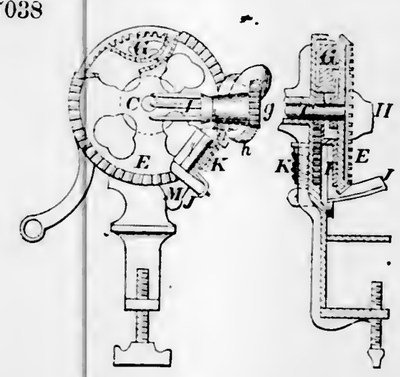
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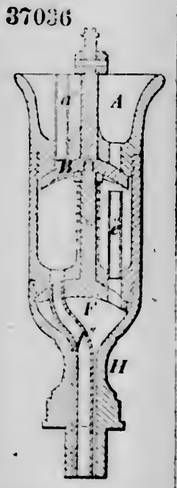
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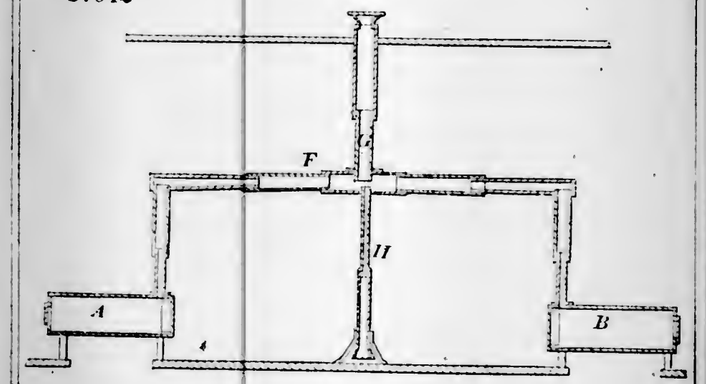
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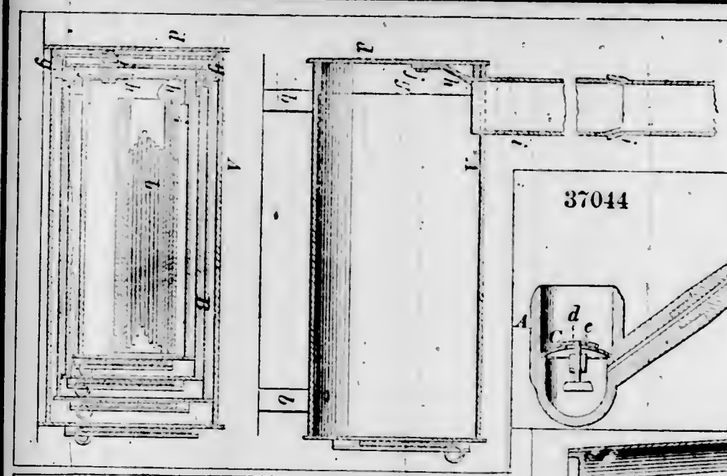
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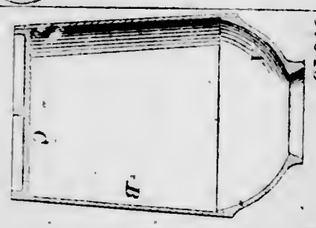


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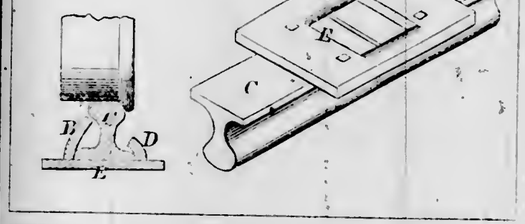


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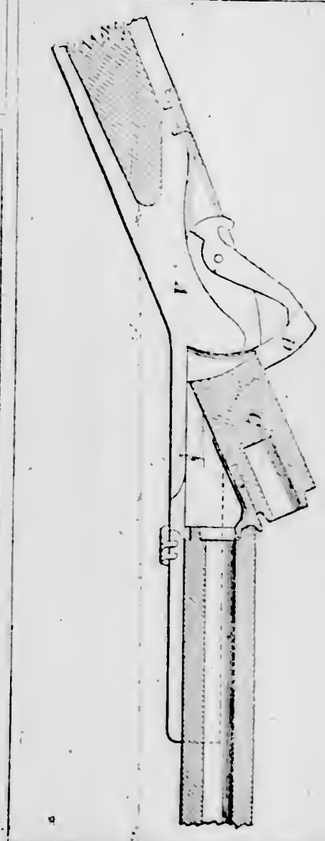
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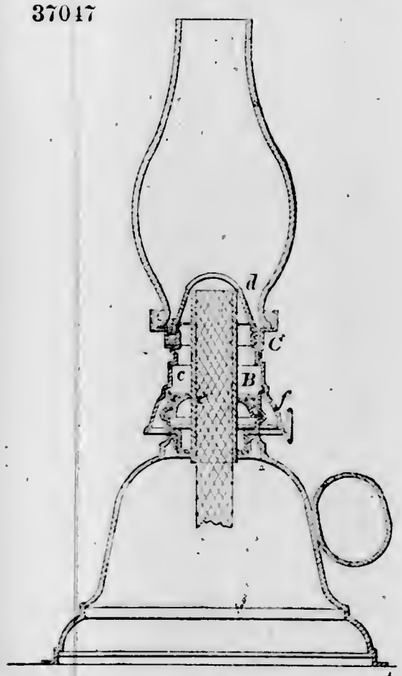
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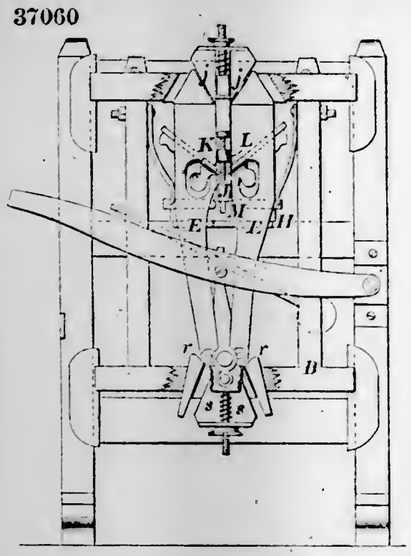
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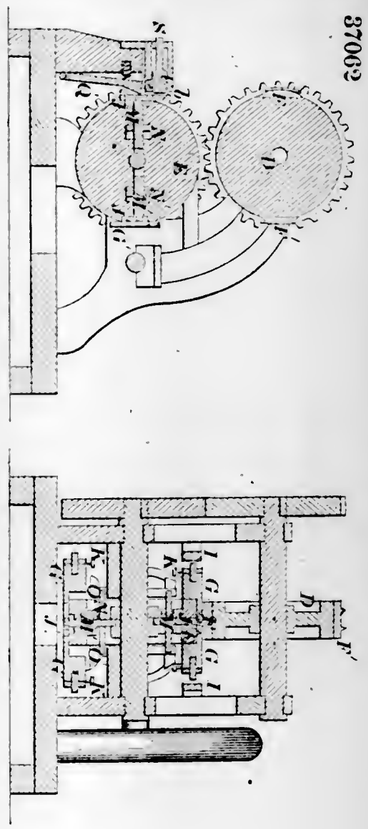
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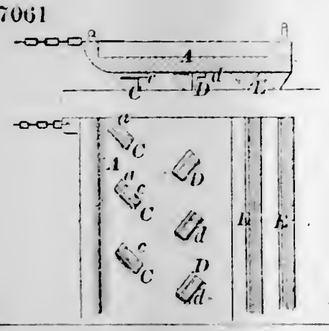
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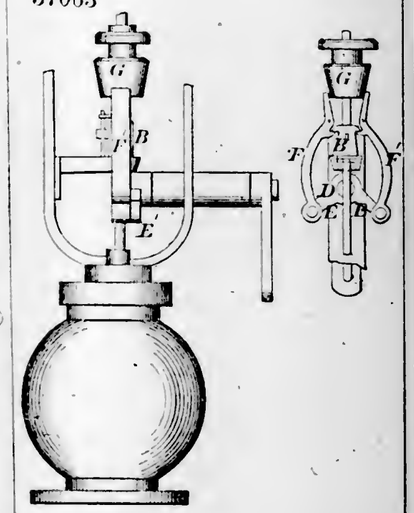
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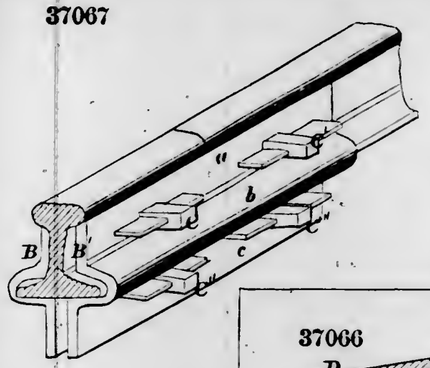
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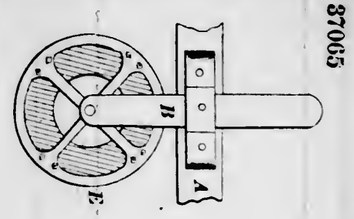
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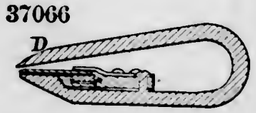
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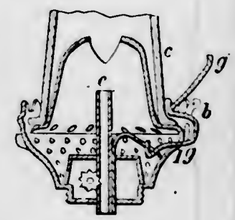
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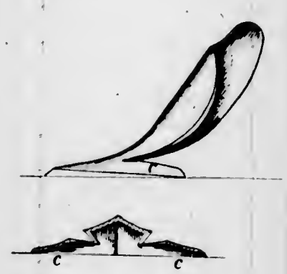
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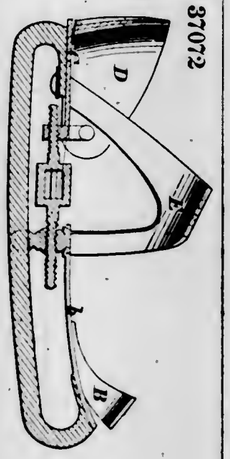
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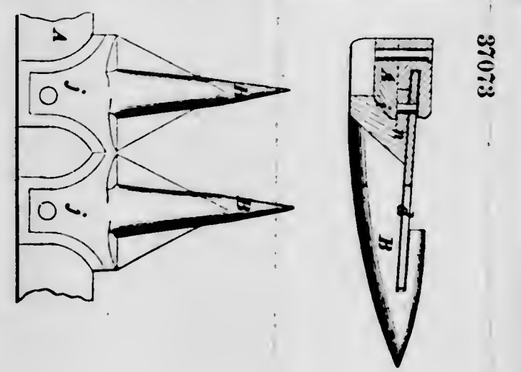
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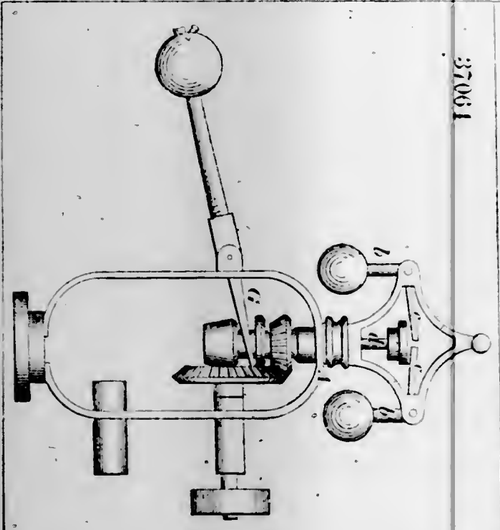
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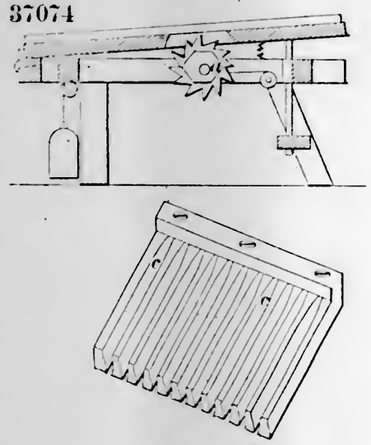
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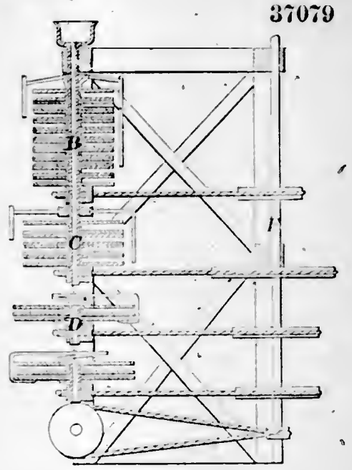
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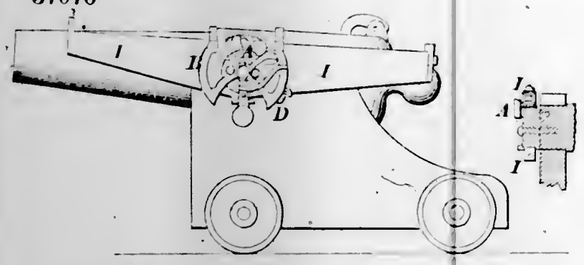
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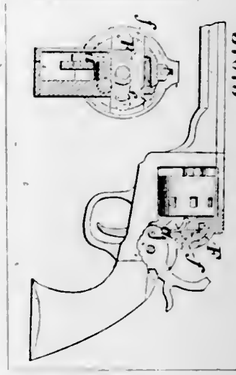
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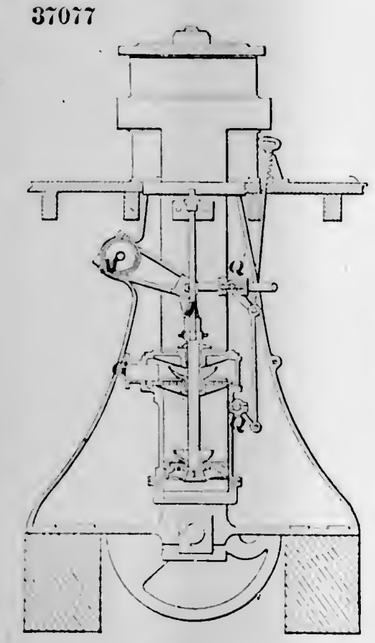
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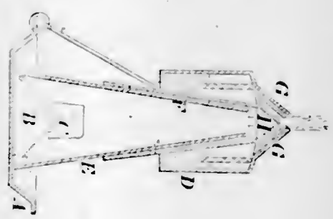
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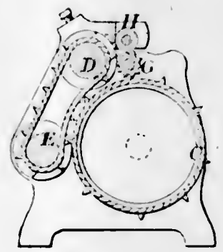
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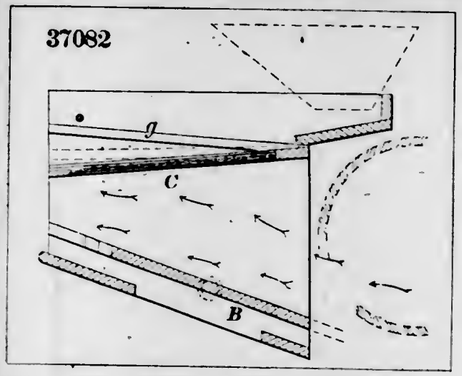
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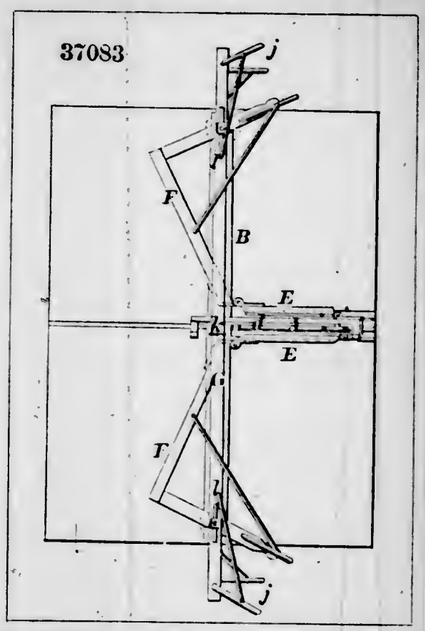
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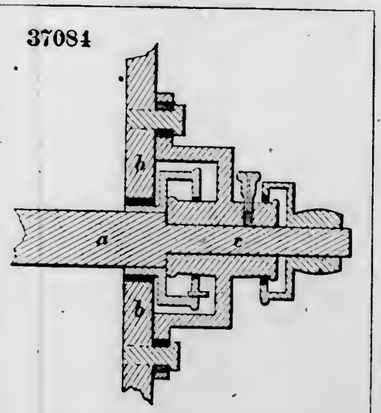
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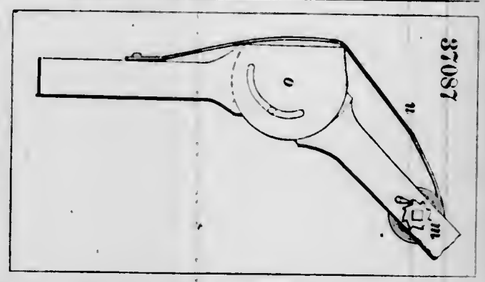
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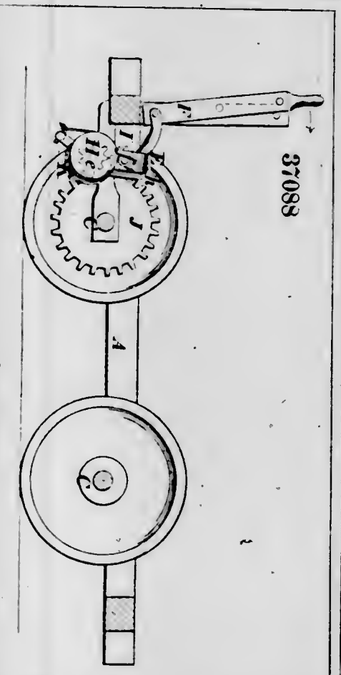
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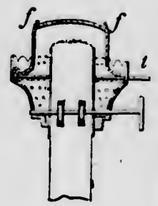
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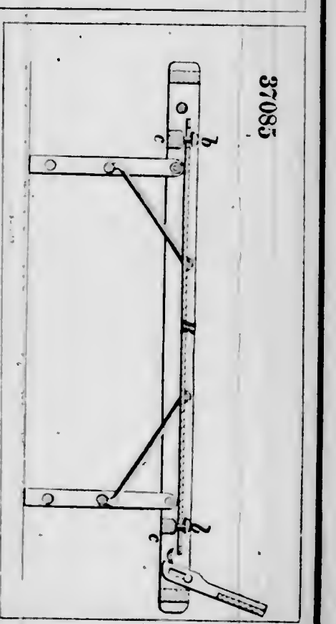
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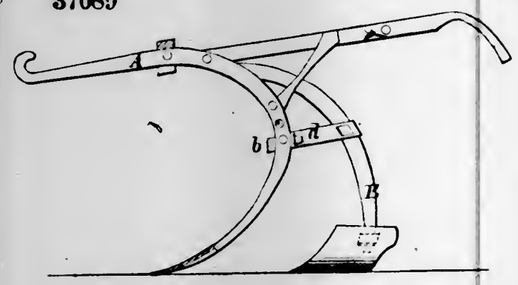
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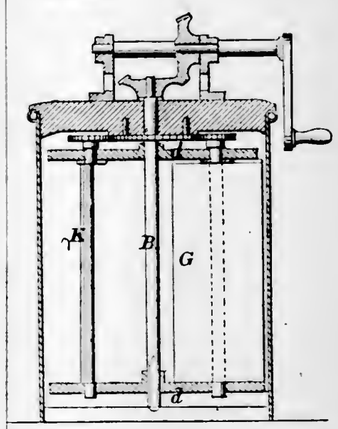
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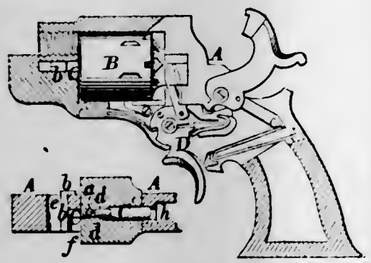
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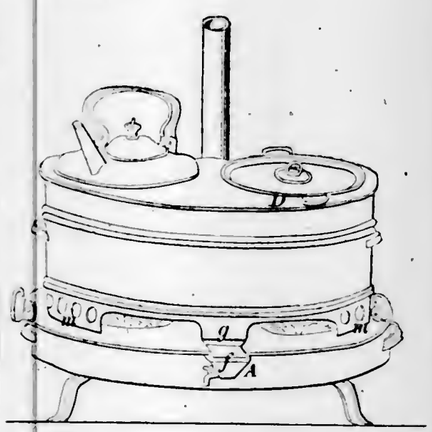
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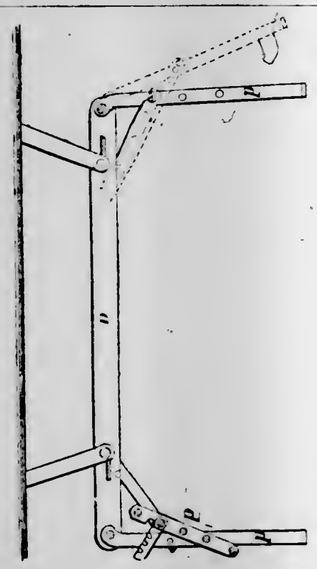
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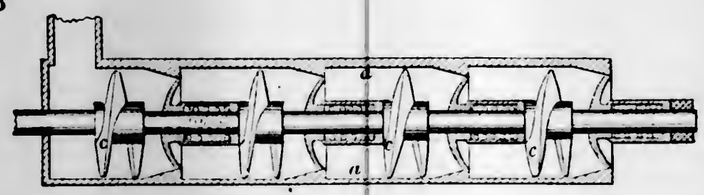
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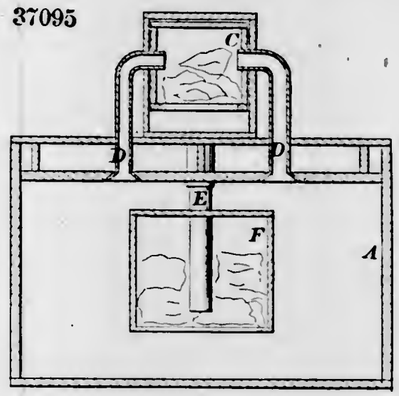
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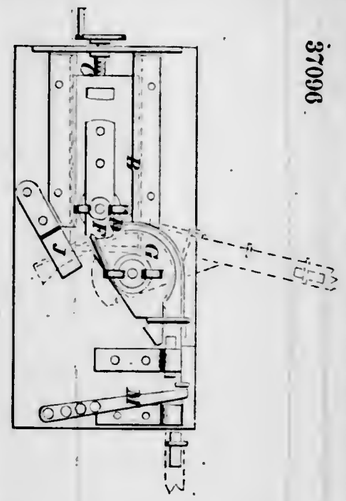
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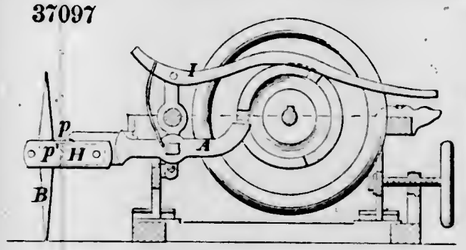
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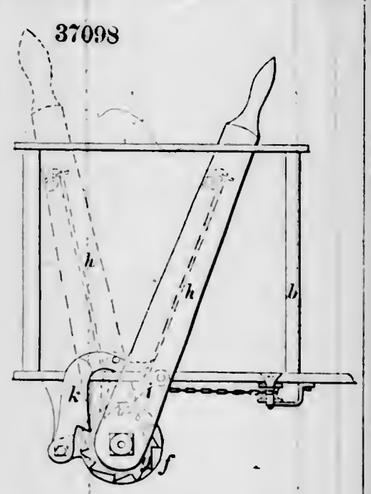
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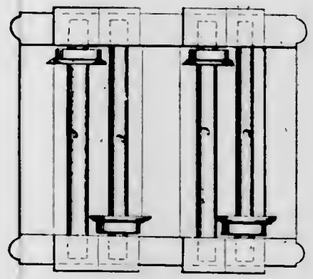
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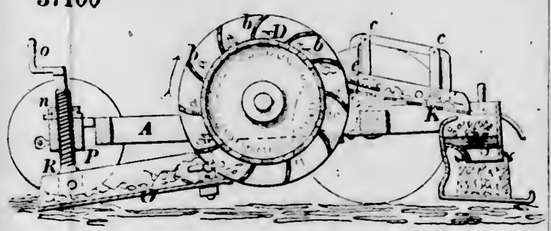
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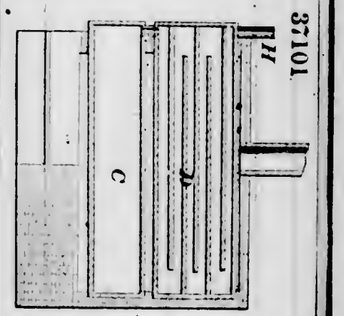
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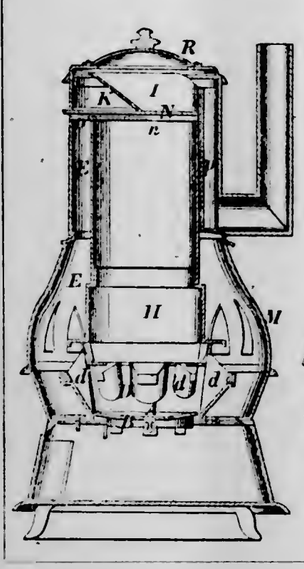
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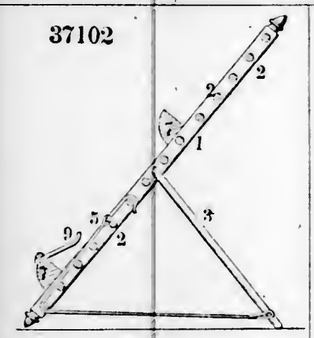
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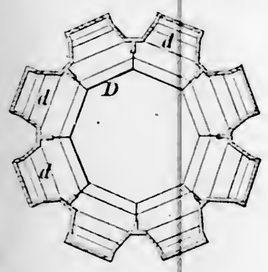


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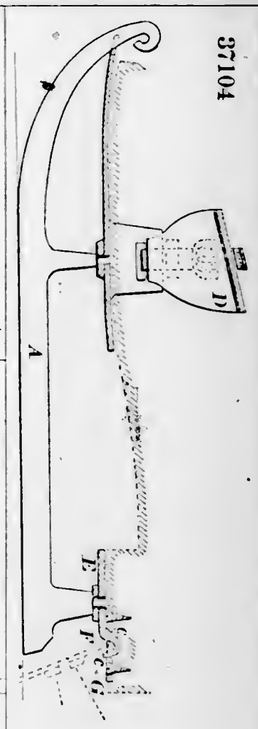


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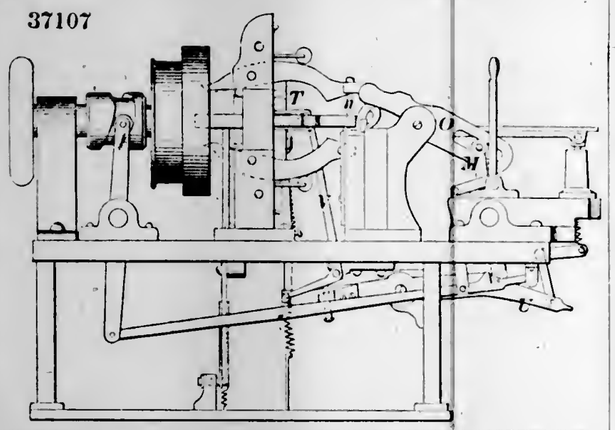




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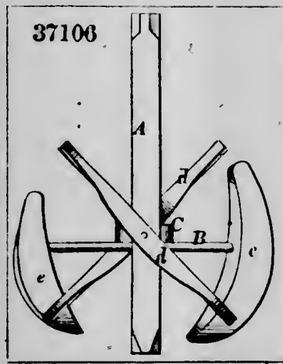


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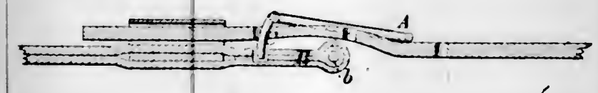


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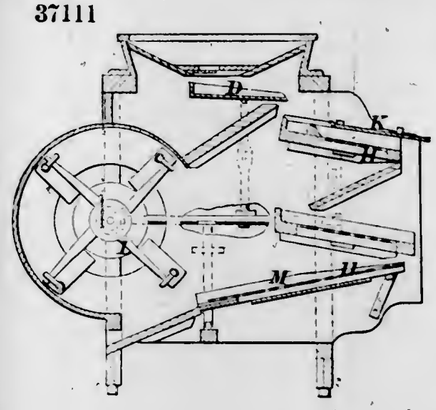
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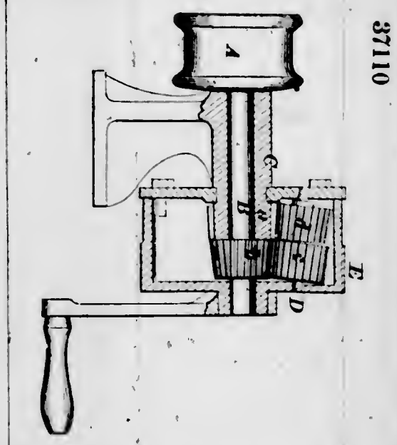
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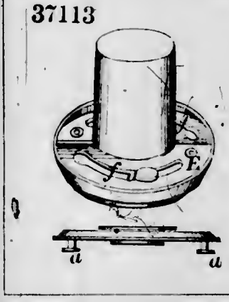
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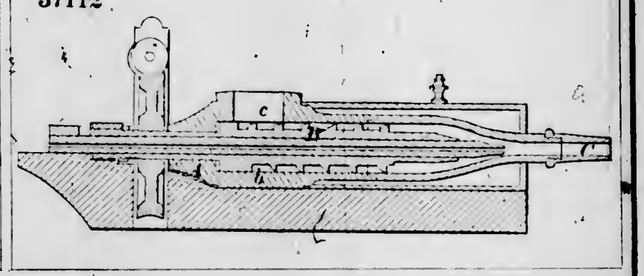
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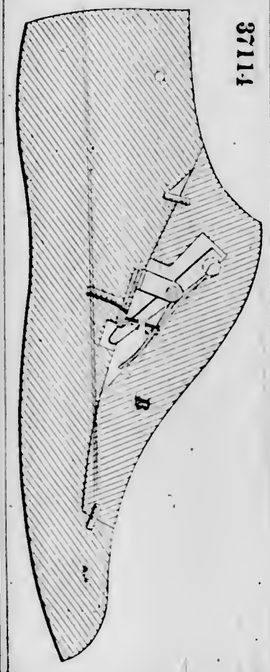
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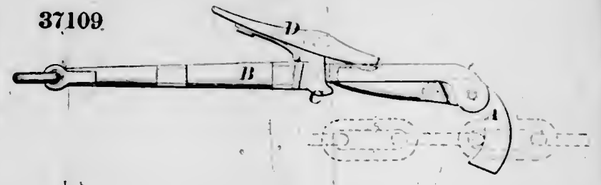
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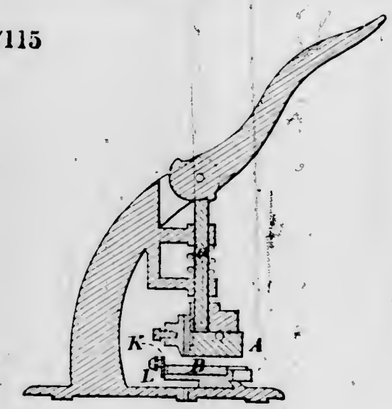
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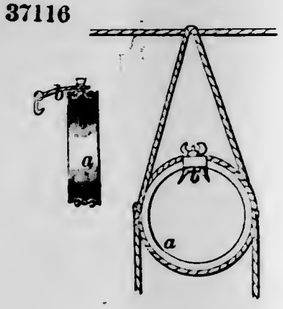
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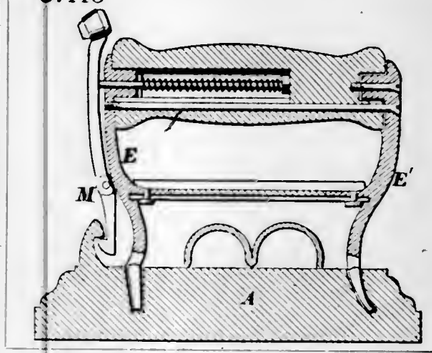
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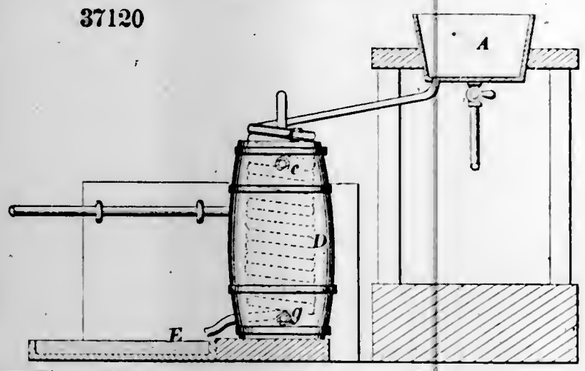
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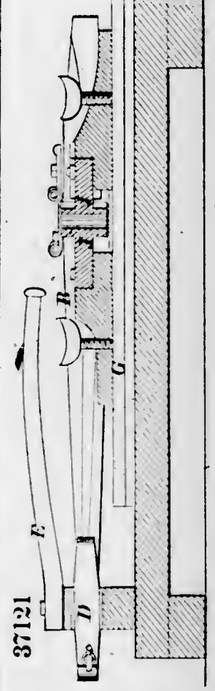


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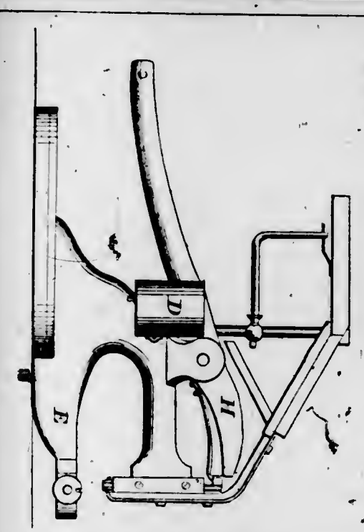


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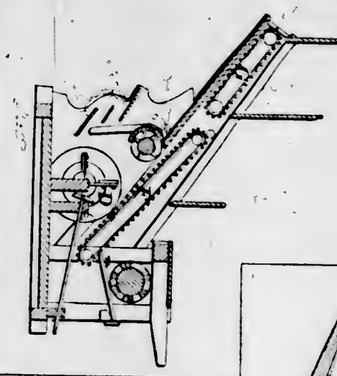
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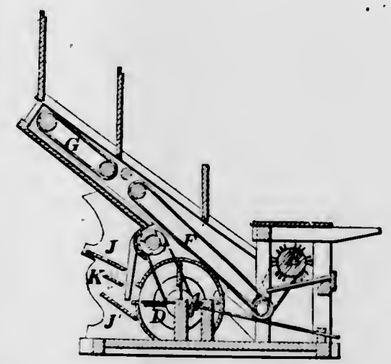
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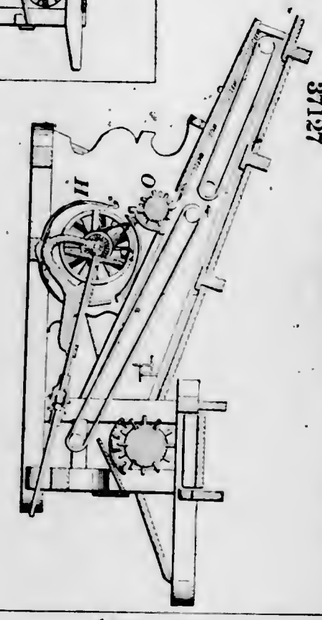
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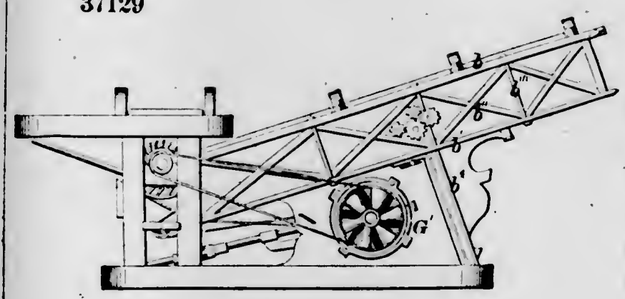
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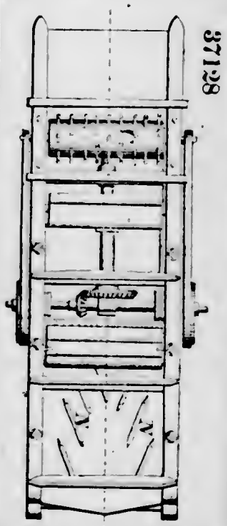
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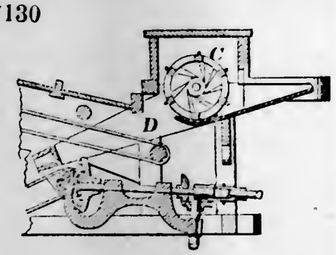
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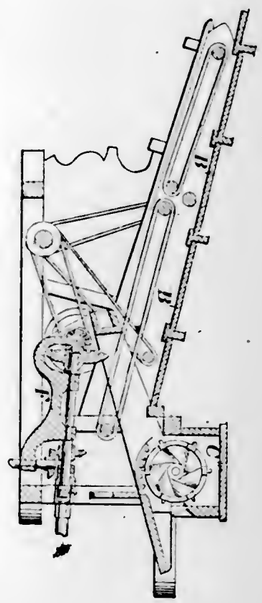
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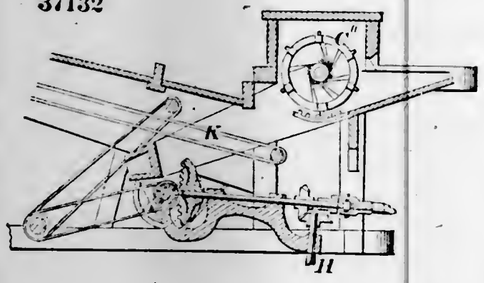
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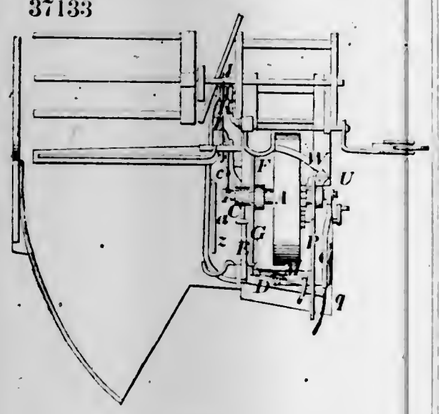
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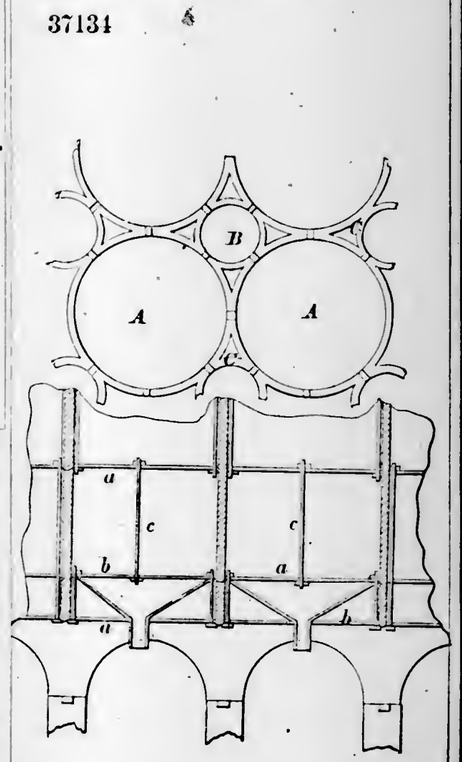
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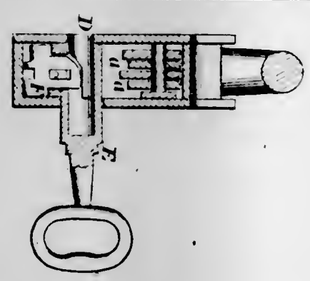
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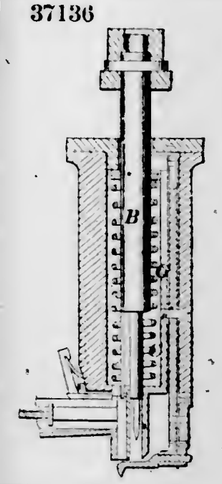
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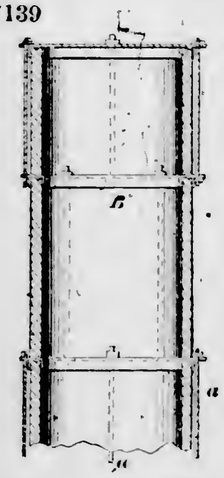
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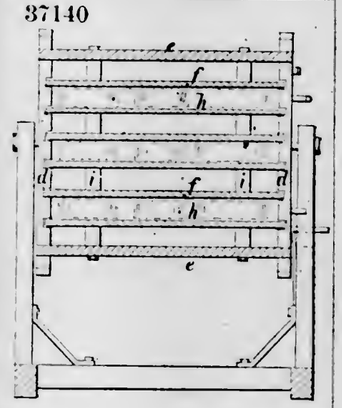
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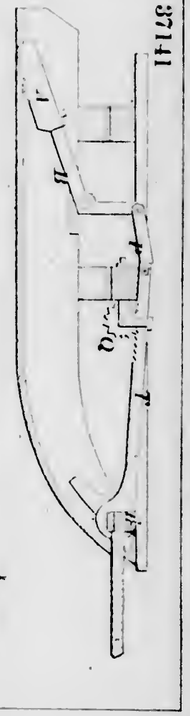
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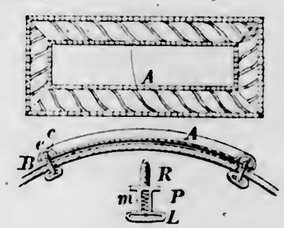
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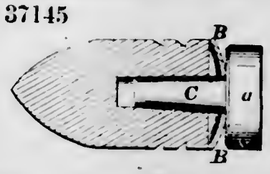
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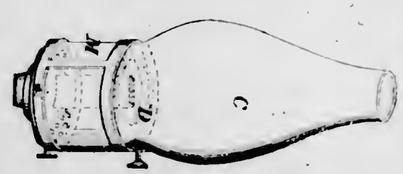
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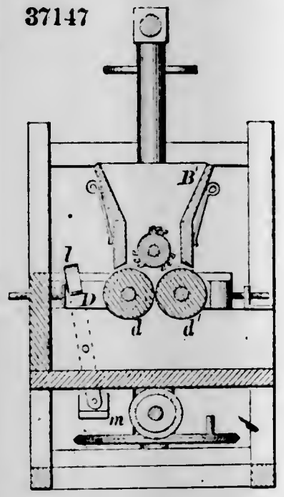
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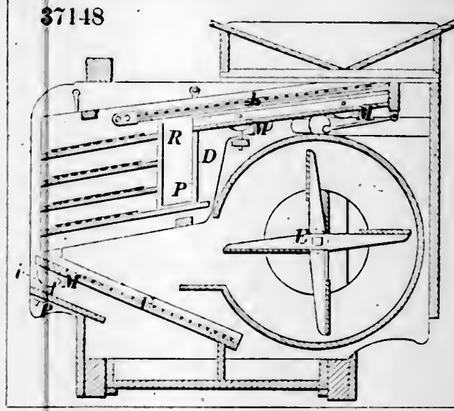
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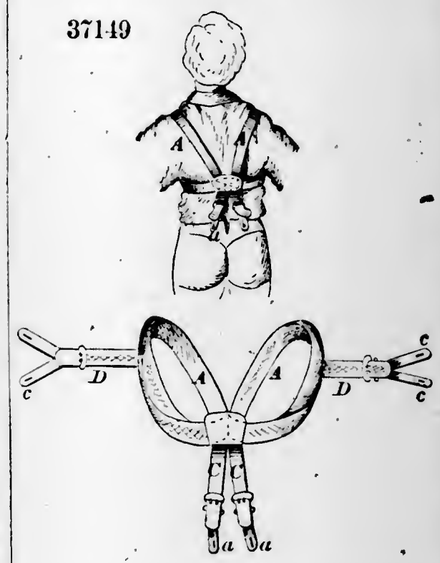
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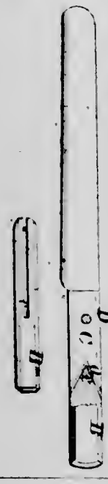
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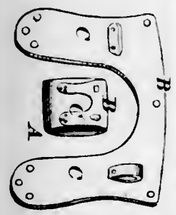
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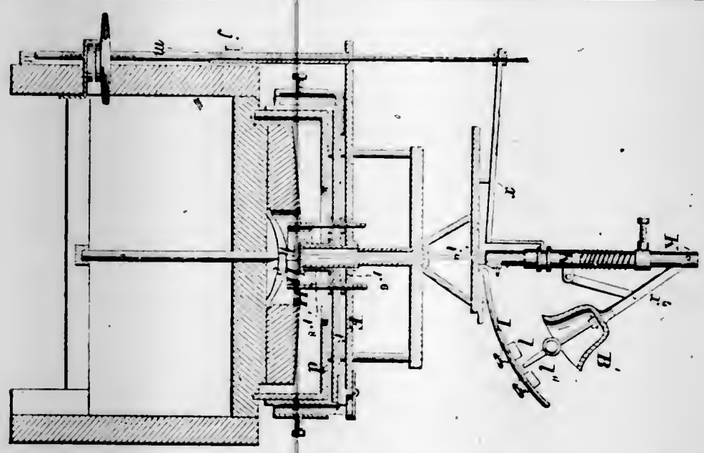
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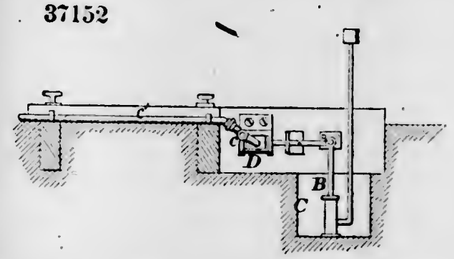
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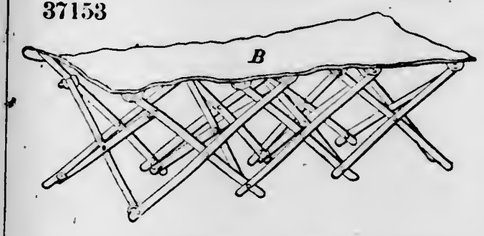
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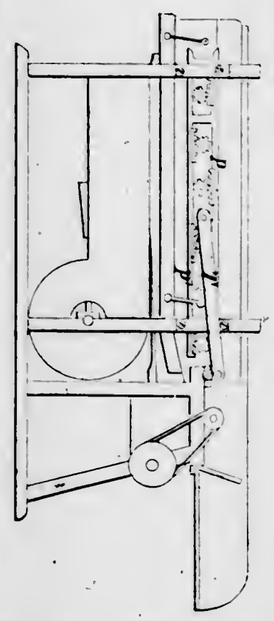
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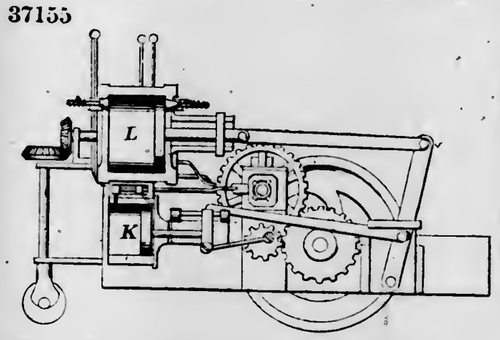
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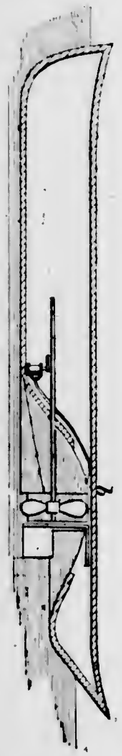
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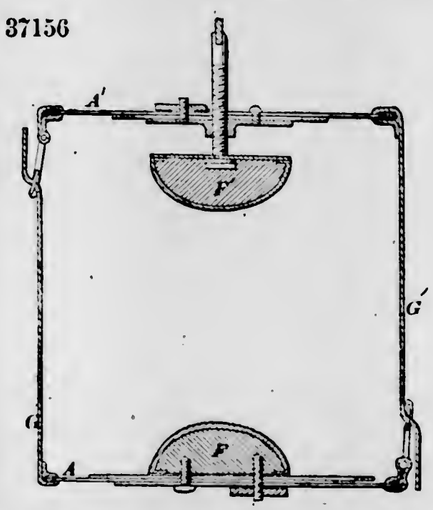
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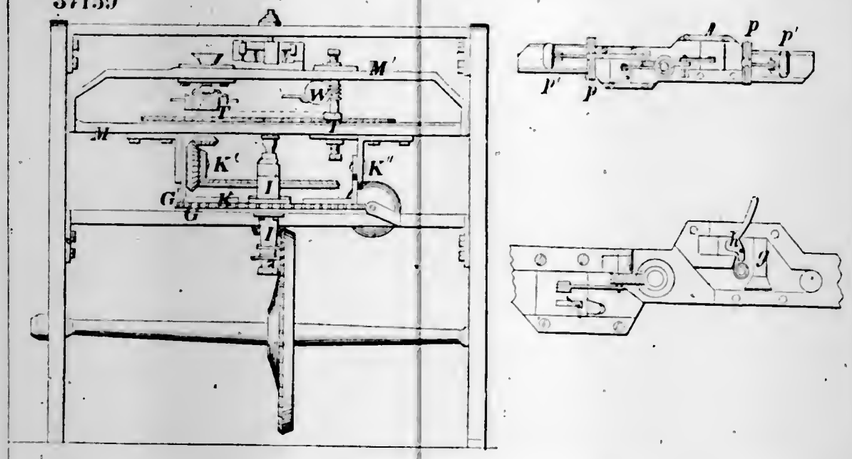
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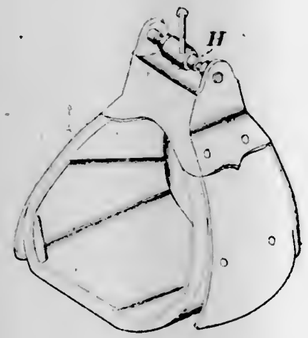
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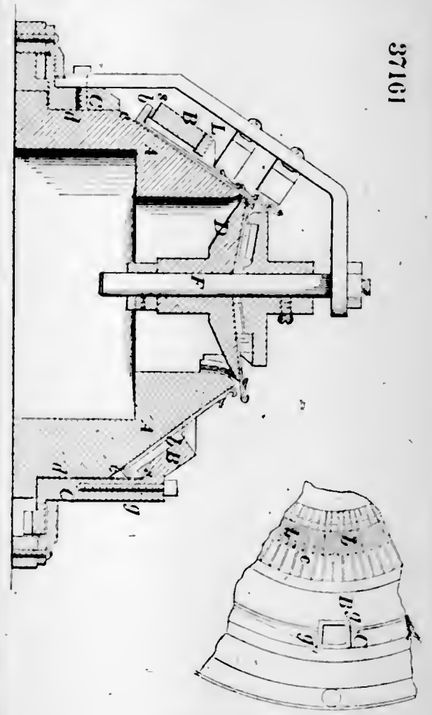
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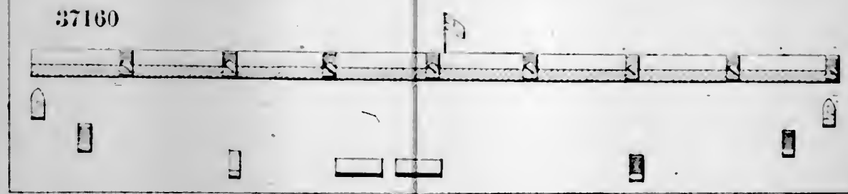
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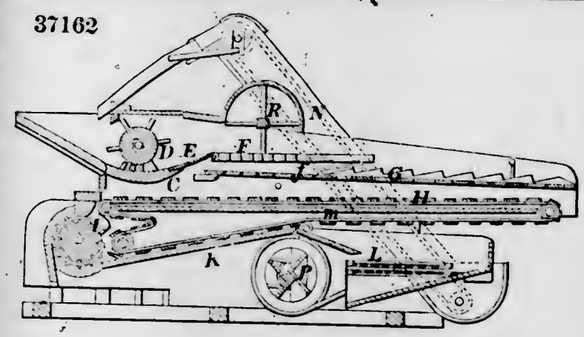
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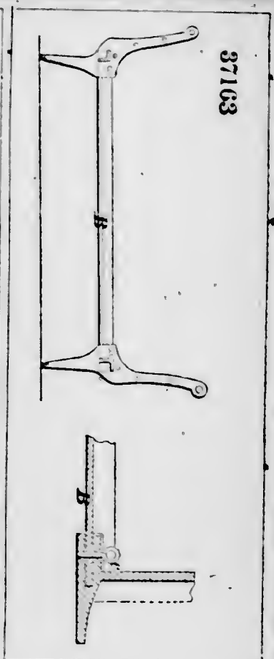
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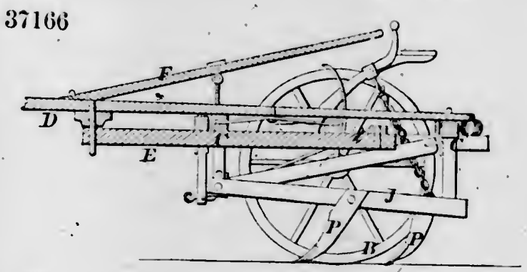
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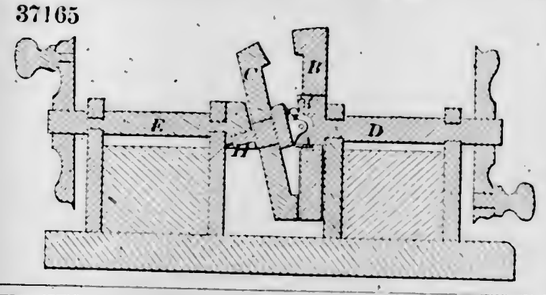
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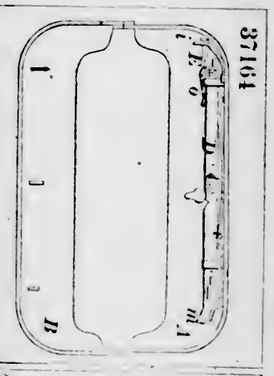
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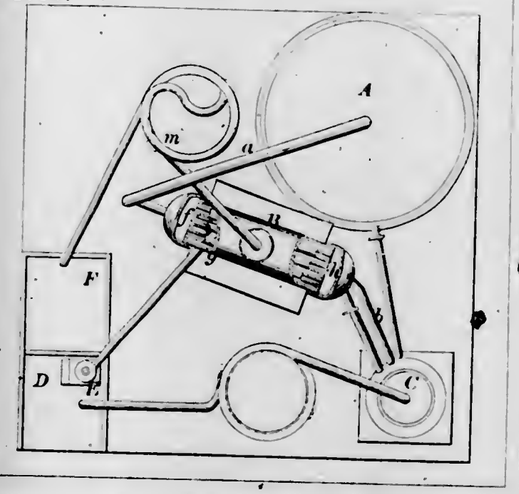
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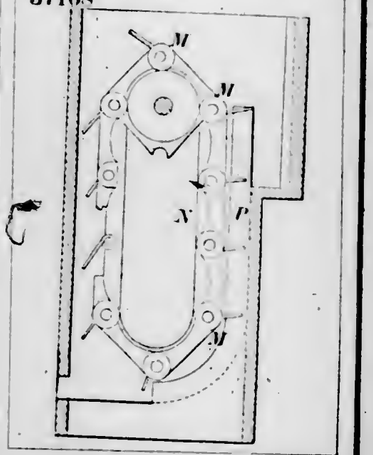
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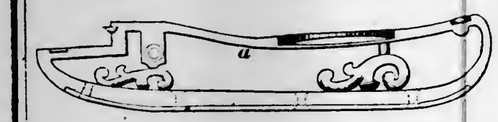
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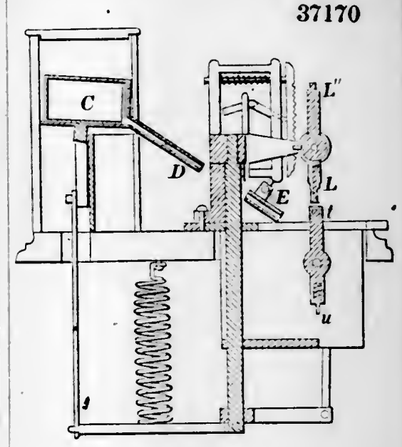
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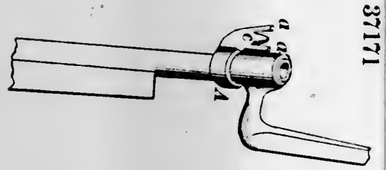
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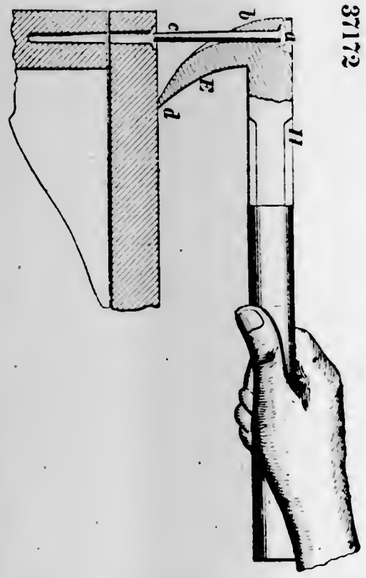
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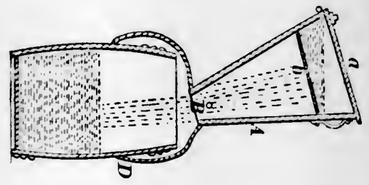
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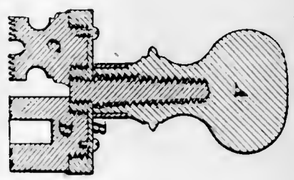
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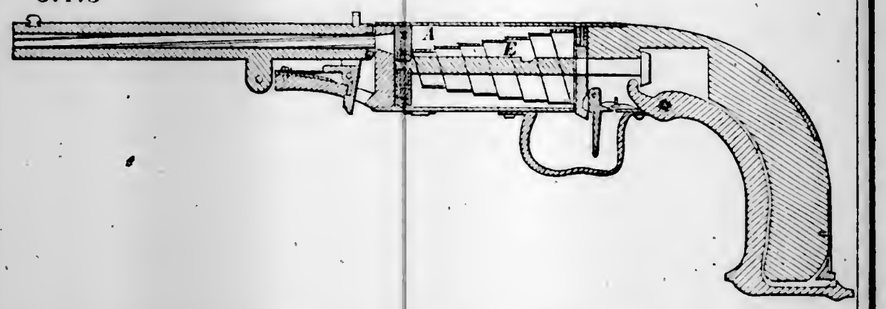
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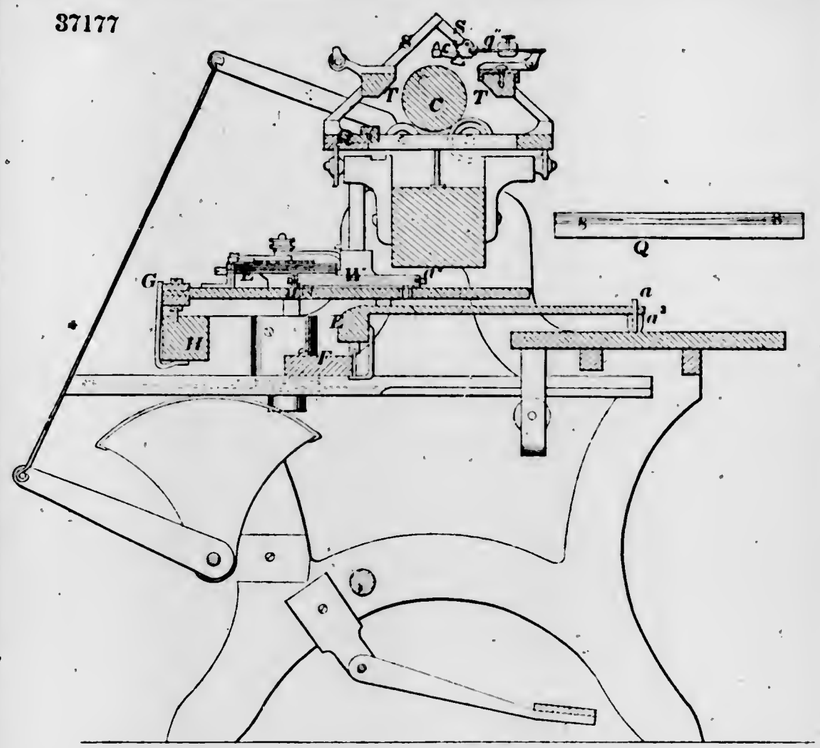
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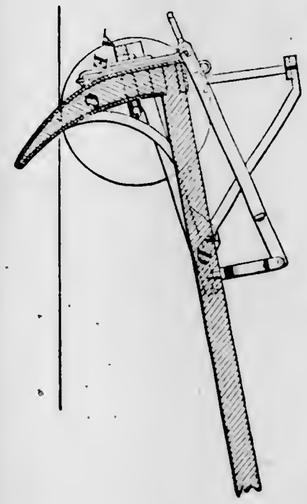
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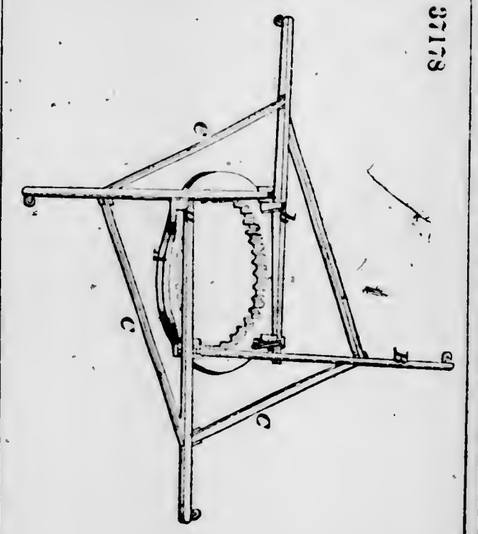
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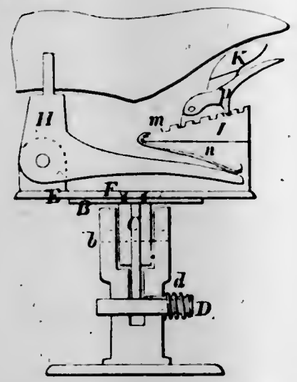
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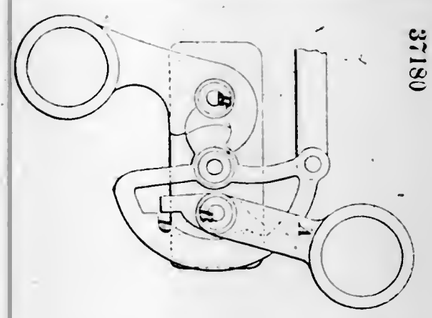
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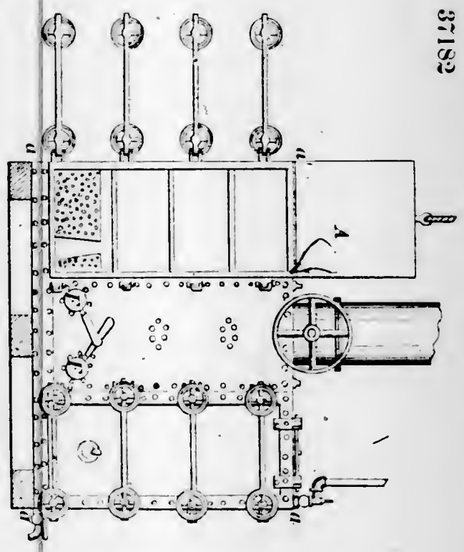
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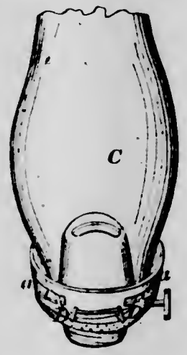
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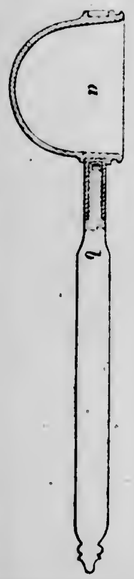
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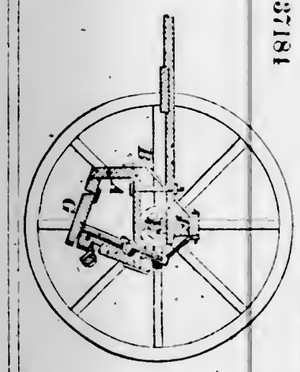
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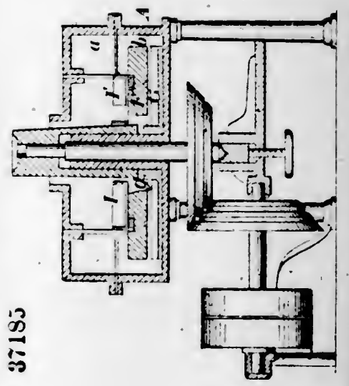
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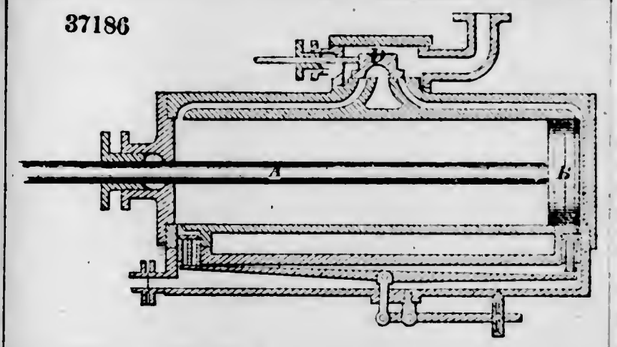
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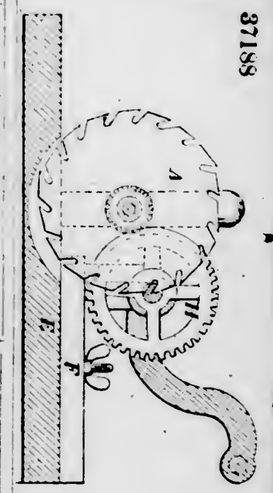
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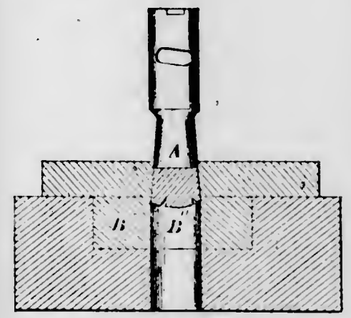
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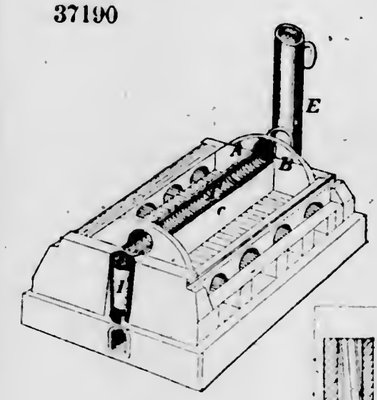
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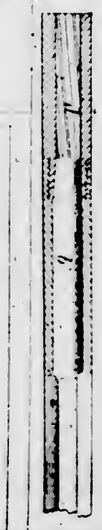
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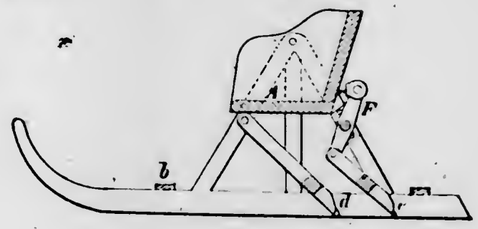
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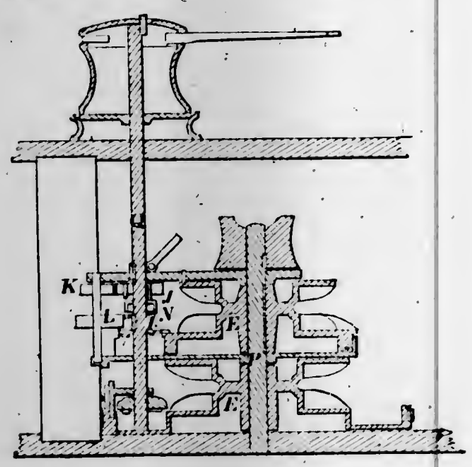
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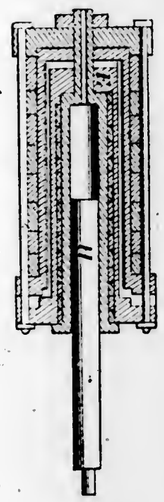
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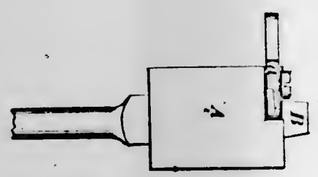
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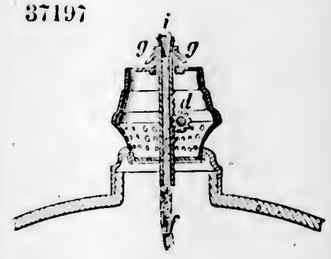
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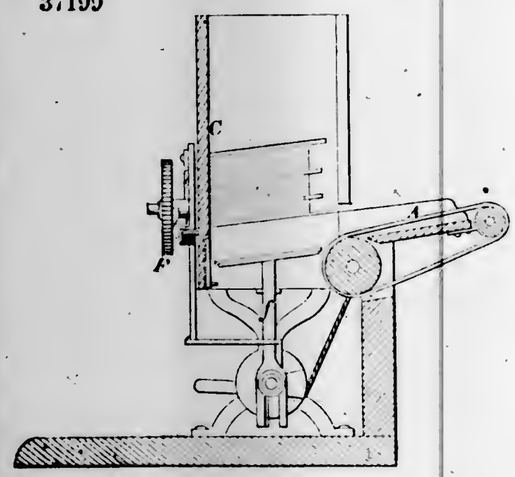
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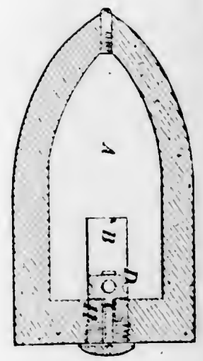
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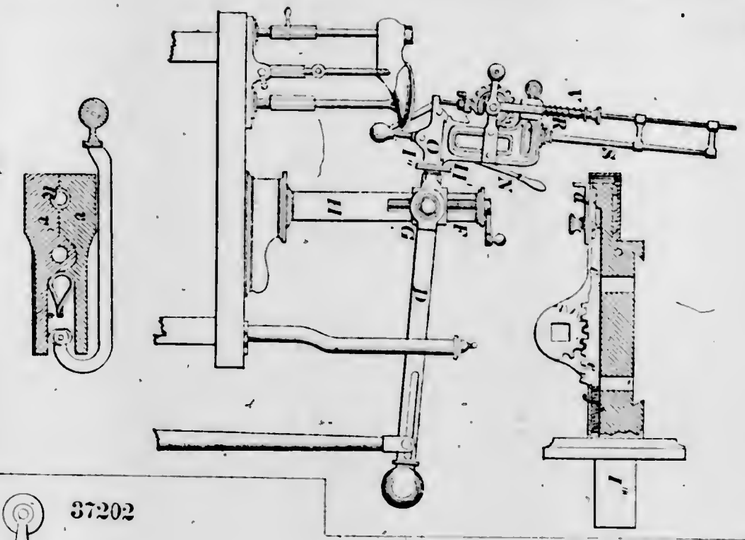
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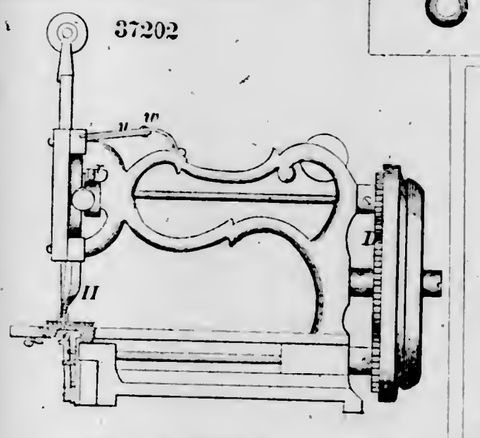
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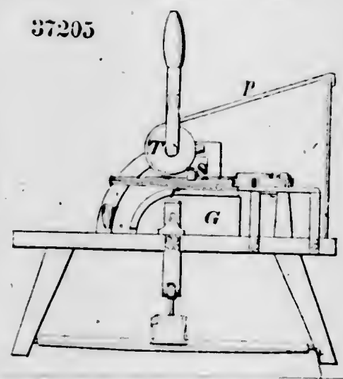
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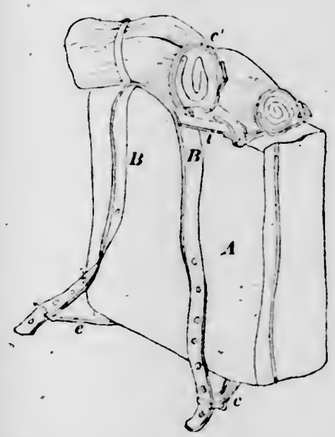
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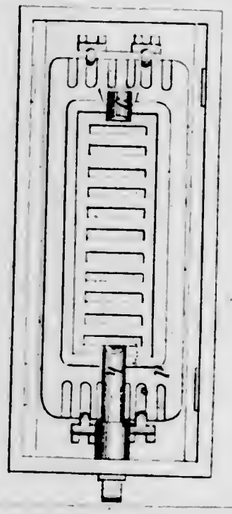
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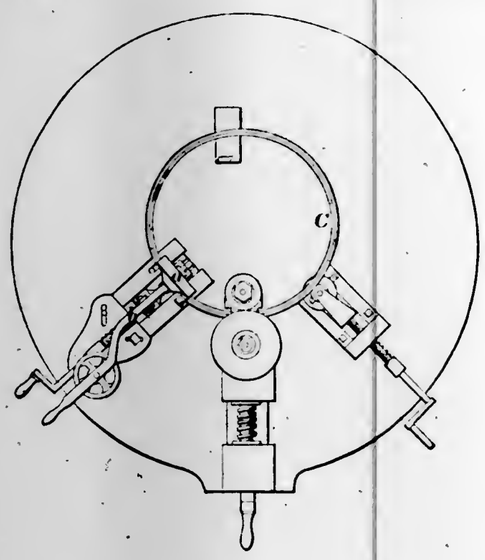
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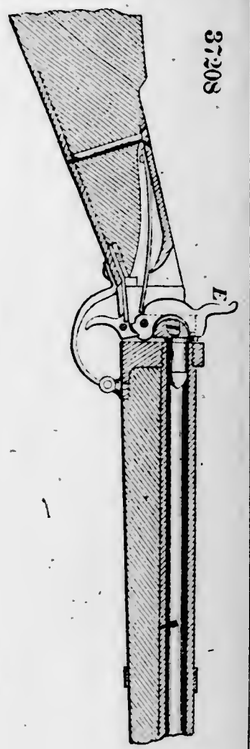
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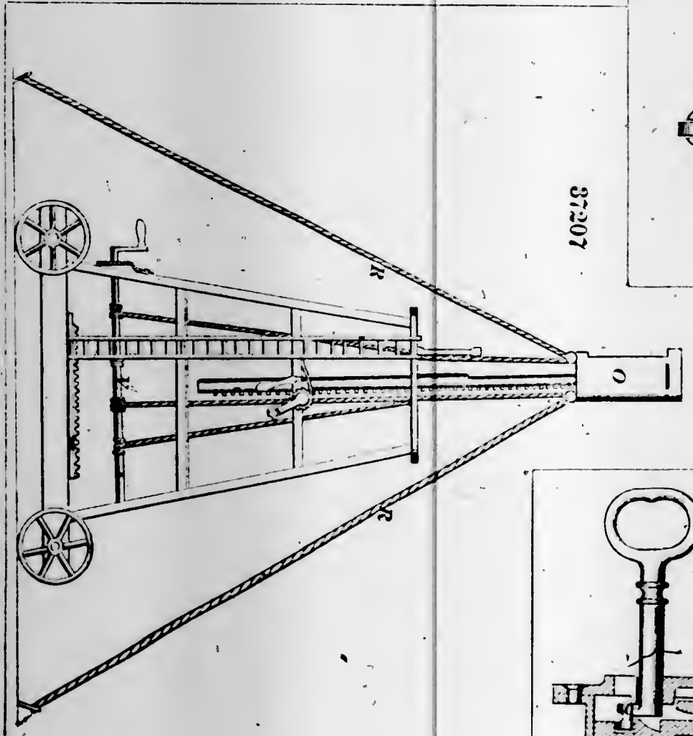
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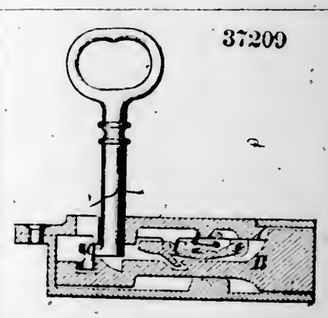
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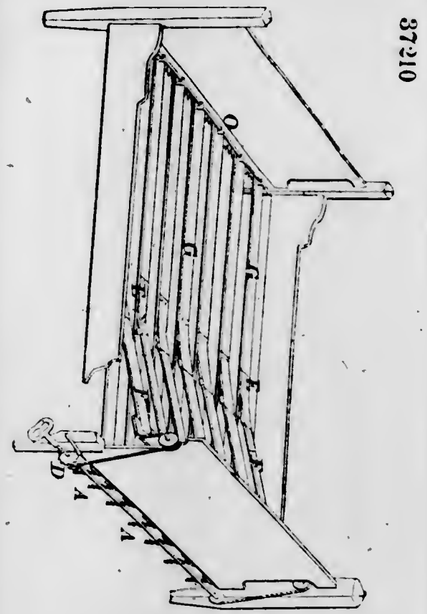
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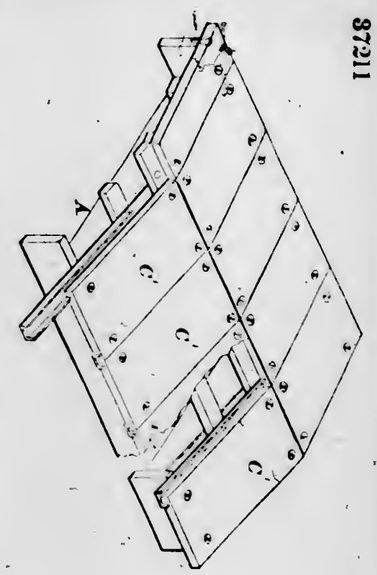
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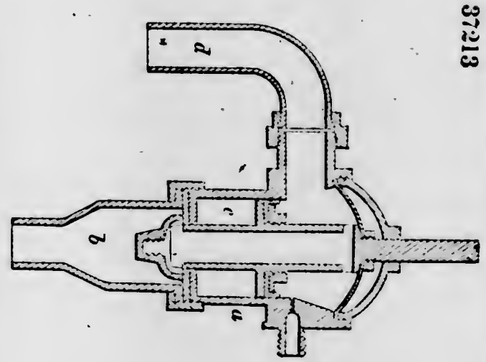
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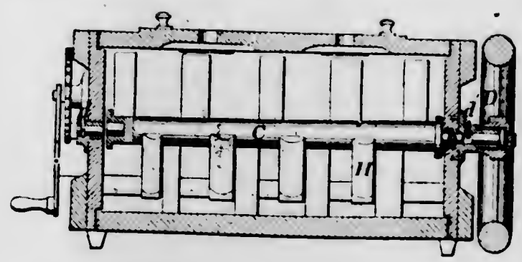
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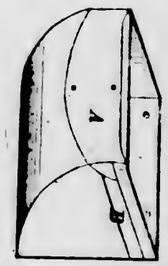
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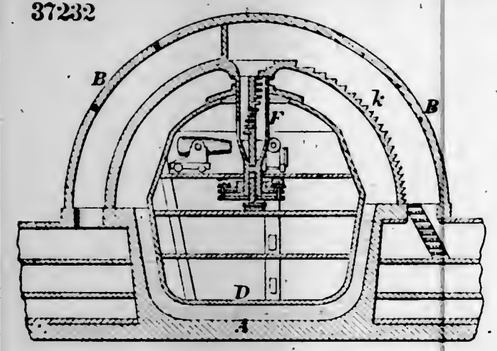
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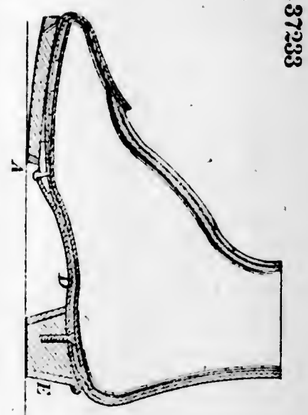
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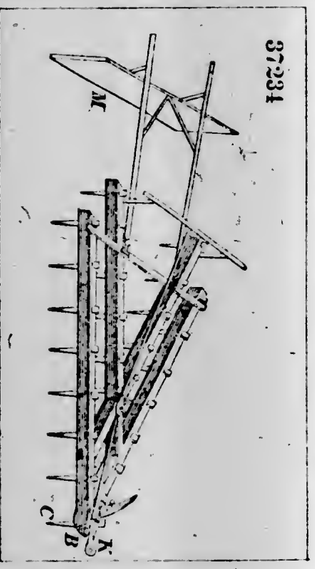
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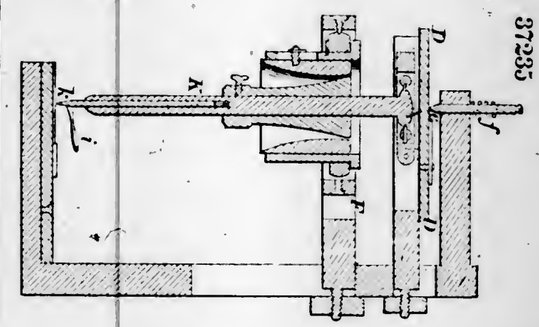
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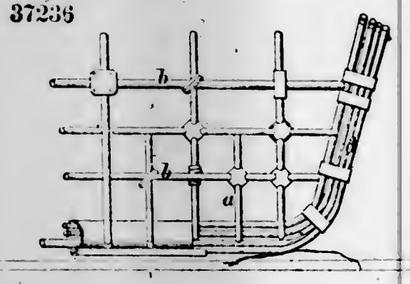
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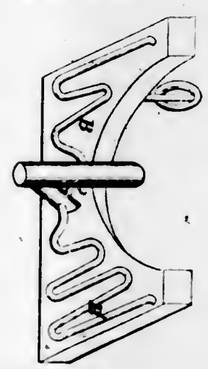
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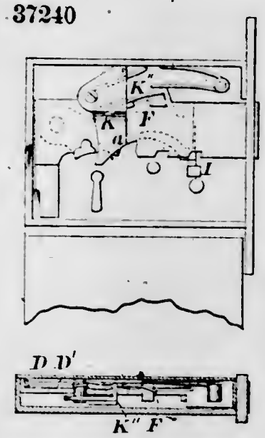
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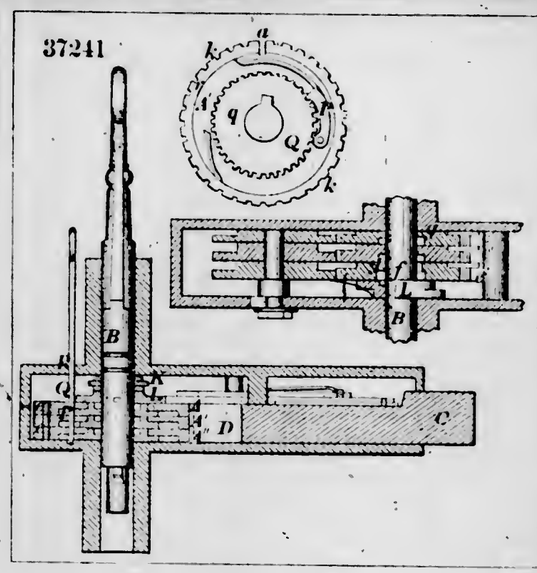
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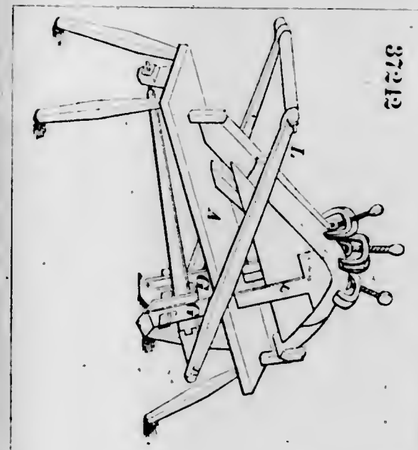
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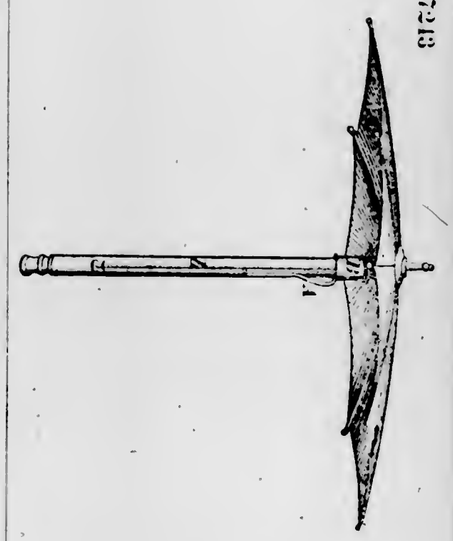
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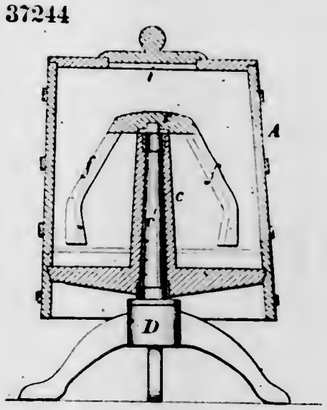
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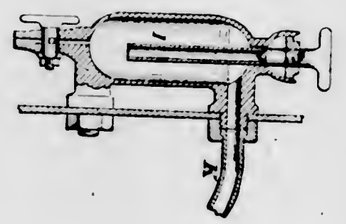
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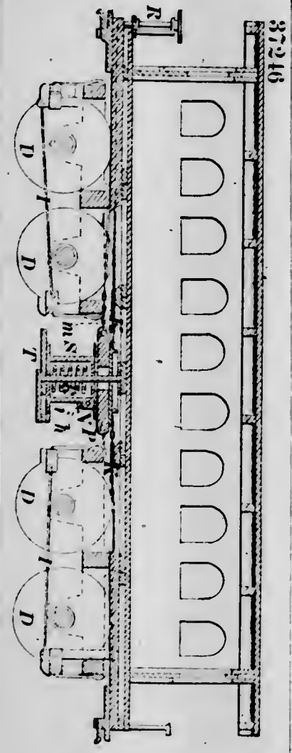
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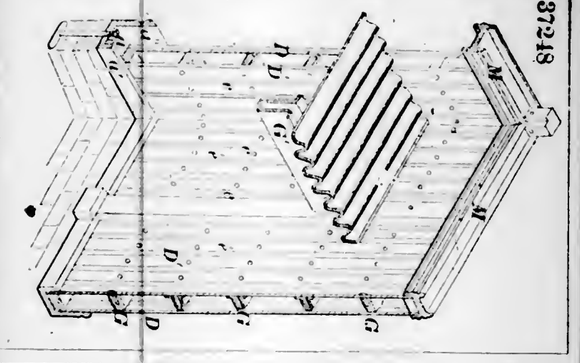
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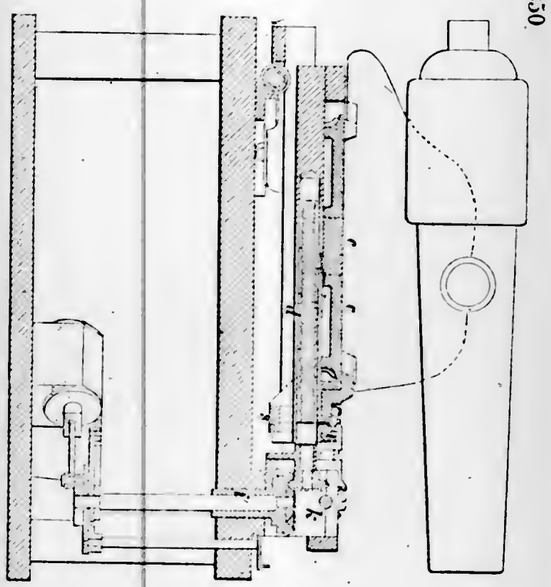
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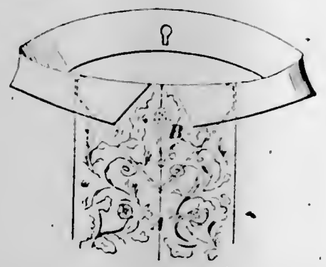
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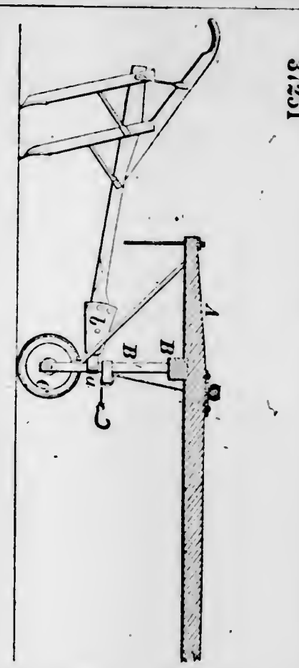
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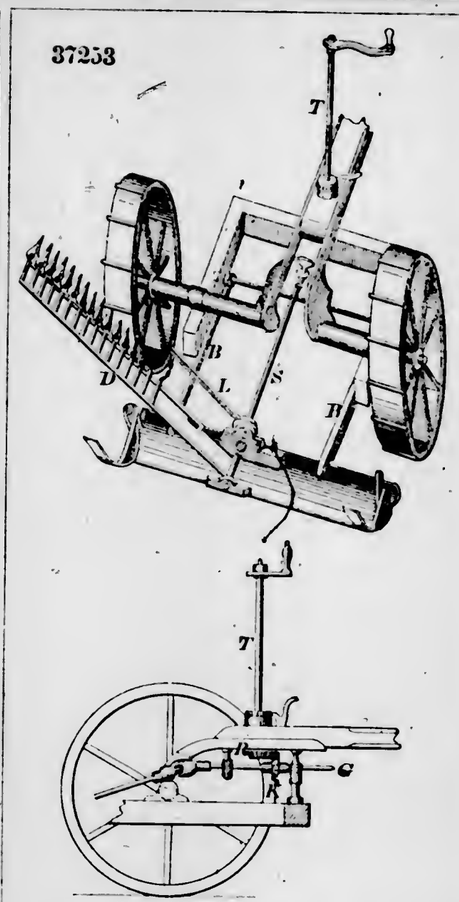
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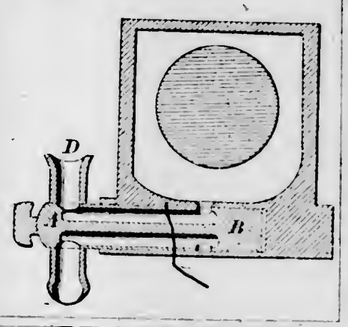
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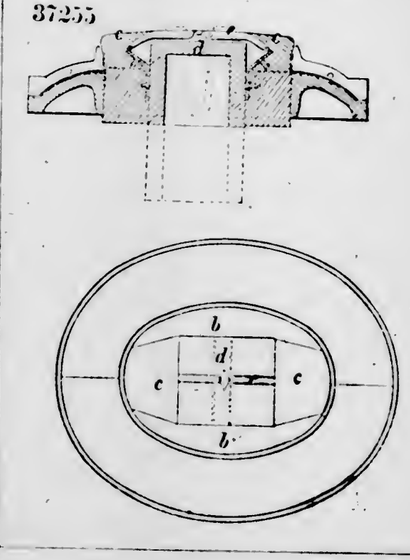
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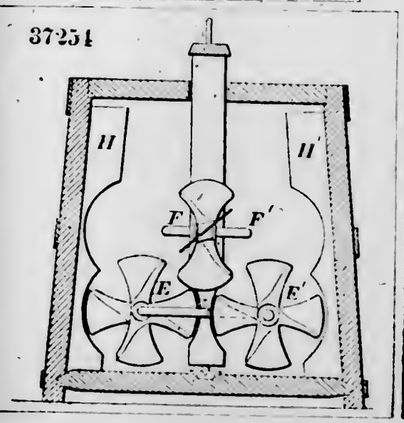
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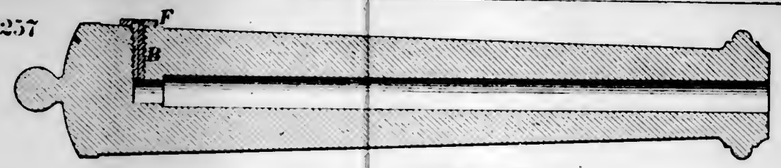
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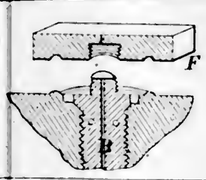


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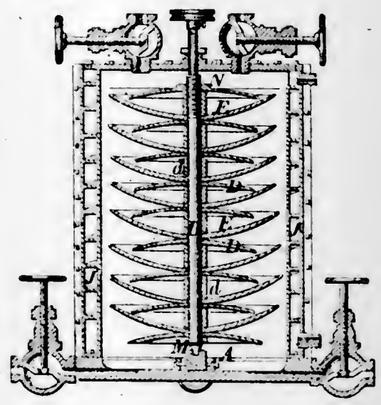


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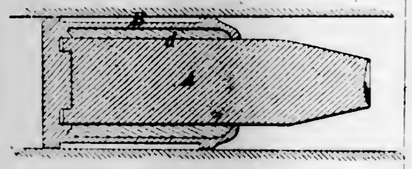




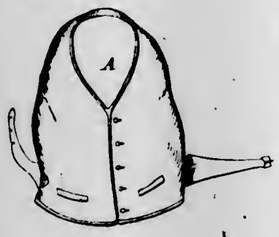
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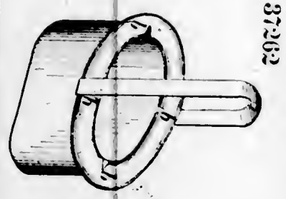
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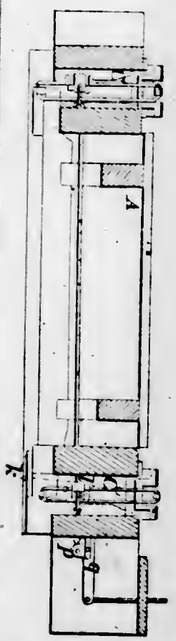
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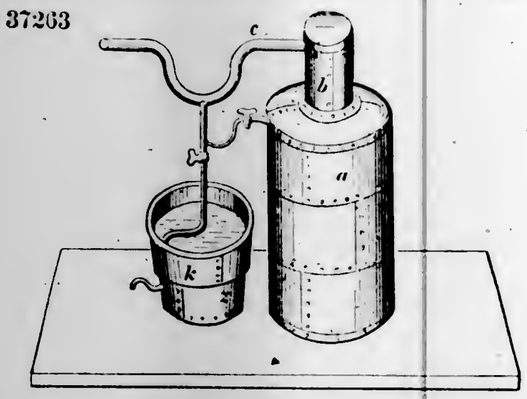
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